



Economy Profile:
Luxembourg

DOING BUSINESS 2013

**Smarter Regulations for
Small and Medium-Size Enterprises**



COMPARING BUSINESS REGULATIONS FOR DOMESTIC FIRMS IN 185 ECONOMIES

10TH EDITION

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INTRODUCTION

Doing Business sheds light on how easy or difficult it is for a local entrepreneur to open and run a small to medium-size business when complying with relevant regulations. It measures and tracks changes in regulations affecting 11 areas in the life cycle of a business: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts, resolving insolvency and employing workers.

In a series of annual reports *Doing Business* presents quantitative indicators on business regulations and the protection of property rights that can be compared across 185 economies, from Afghanistan to Zimbabwe, over time. The data set covers 46 economies in Sub-Saharan Africa, 33 in Latin America and the Caribbean, 24 in East Asia and the Pacific, 24 in Eastern Europe and Central Asia, 19 in the Middle East and North Africa and 8 in South Asia, as well as 31 OECD high-income economies. The indicators are used to analyze economic outcomes and identify what reforms have worked, where and why.

This economy profile presents the *Doing Business* indicators for Luxembourg. To allow useful comparison, it also provides data for other selected economies (comparator economies) for each indicator. The data in this report are current as of June 1, 2012

(except for the paying taxes indicators, which cover the period January–December 2011).

The *Doing Business* methodology has limitations. Other areas important to business—such as an economy's proximity to large markets, the quality of its infrastructure services (other than those related to trading across borders and getting electricity), the security of property from theft and looting, the transparency of government procurement, macroeconomic conditions or the underlying strength of institutions—are not directly studied by *Doing Business*. The indicators refer to a specific type of business, generally a local limited liability company operating in the largest business city. Because standard assumptions are used in the data collection, comparisons and benchmarks are valid across economies. The data not only highlight the extent of obstacles to doing business; they also help identify the source of those obstacles, supporting policy makers in designing regulatory reform.

More information is available in the full report. *Doing Business 2013* presents the indicators, analyzes their relationship with economic outcomes and presents business regulatory reforms. The data, along with information on ordering *Doing Business 2013*, are available on the *Doing Business* website at <http://www.doingbusiness.org>.

THE BUSINESS ENVIRONMENT

For policy makers trying to improve their economy's regulatory environment for business, a good place to start is to find out how it compares with the regulatory environment in other economies. *Doing Business* provides an aggregate ranking on the ease of doing business based on indicator sets that measure and benchmark regulations applying to domestic small to medium-size businesses through their life cycle. Economies are ranked from 1 to 185 by the ease of doing business index. For each economy the index is calculated as the ranking on the simple average of its percentile rankings on each of the 10 topics included in the index in *Doing Business 2013*: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts and resolving insolvency. The ranking on each topic is the simple average of the percentile rankings on its component indicators (see the data notes for more details). The employing workers indicators are not included in this year's aggregate ease of doing business ranking, but the data are presented in this year's economy profile.

The aggregate ranking on the ease of doing business benchmarks each economy's performance on the indicators against that of all other economies in the *Doing Business* sample (figure 1.1). While this ranking tells much about the business environment in an economy, it does not tell the whole story. The ranking on the ease of doing business, and the underlying indicators, do not measure all aspects of the business environment that matter to firms and investors or that affect the competitiveness of the economy. Still, a high ranking does mean that the government has created a regulatory environment conducive to operating a business.

ECONOMY OVERVIEW

Region: OECD high income

Income category: High income

Population: 517,000

GNI per capita (US\$): 78,130

DB2013 rank: 56

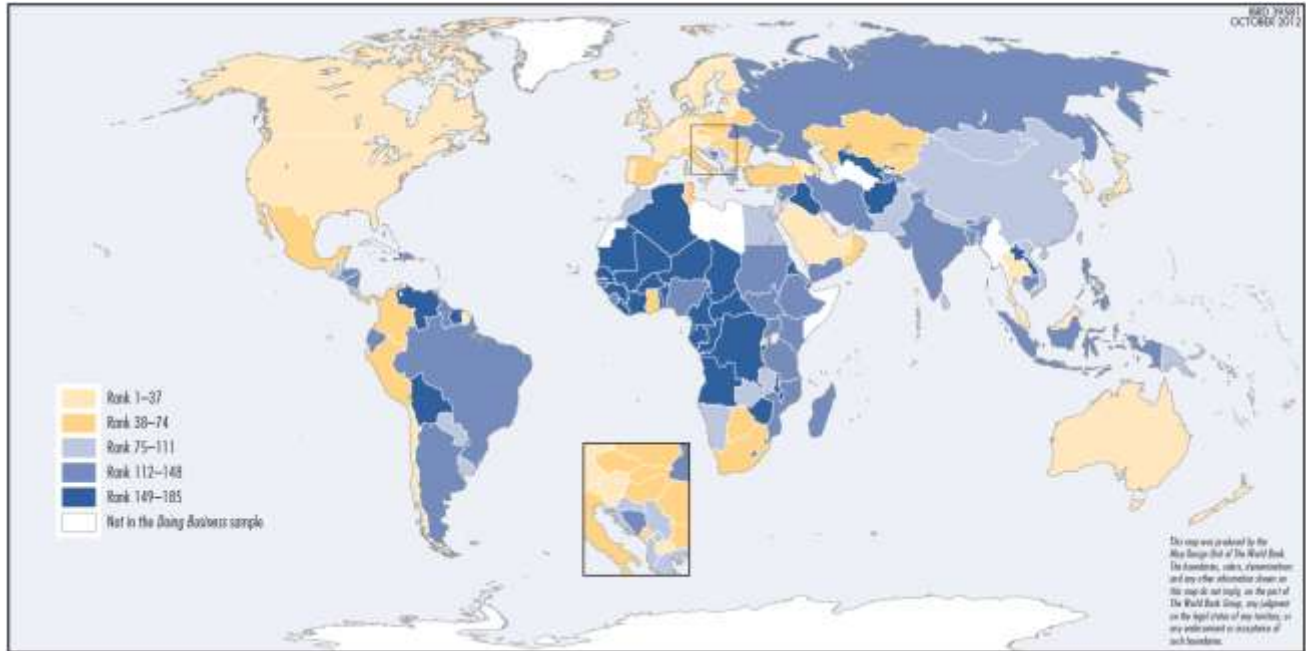
DB2012 rank: 52*

Change in rank: -4

* DB2012 ranking shown is not last year's published ranking but a comparable ranking for DB2012 that captures the effects of such factors as data corrections and the addition of 2 economies (Barbados and Malta) to the sample this year. See the data notes for sources and definitions.

THE BUSINESS ENVIRONMENT

Figure 1.1 Where economies stand in the global ranking on the ease of doing business



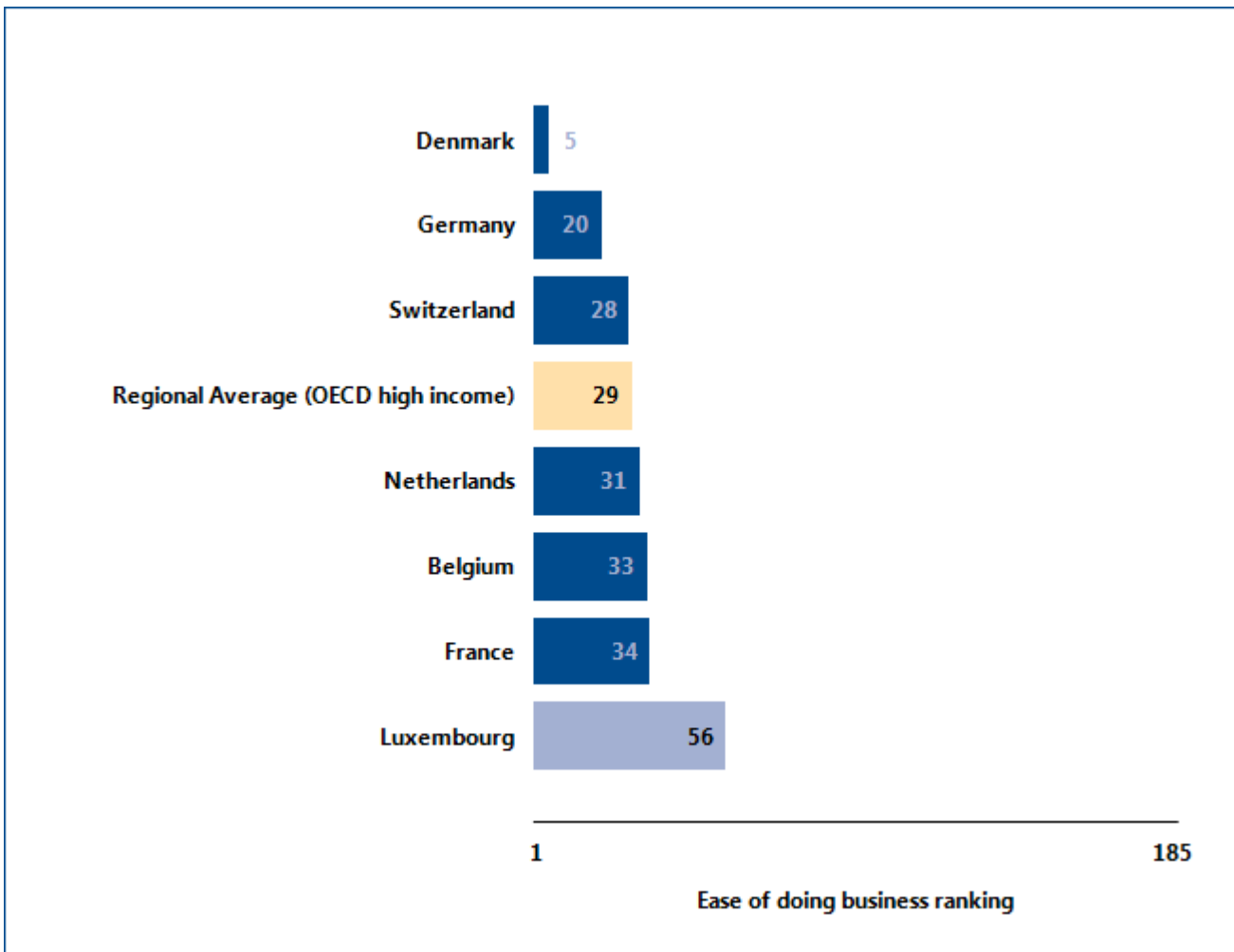
Source: Doing Business database.

THE BUSINESS ENVIRONMENT

For policy makers, knowing where their economy stands in the aggregate ranking on the ease of doing business is useful. Also useful is to know how it ranks relative to comparator economies and

relative to the regional average (figure 1.2). The economy's rankings on the topics included in the ease of doing business index provide another perspective (figure 1.3).

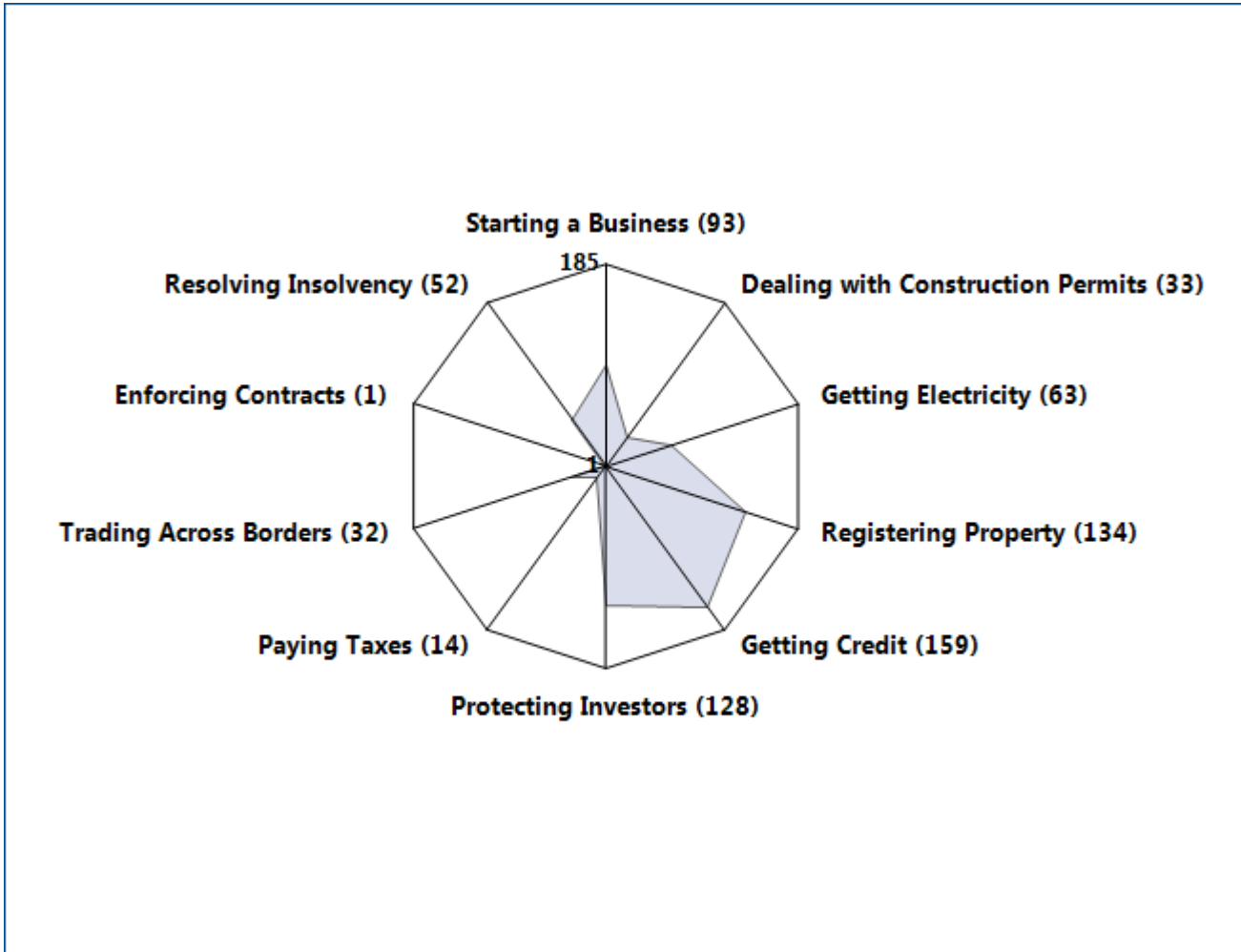
Figure 1.2 How Luxembourg and comparator economies rank on the ease of doing business



Source: Doing Business database.

THE BUSINESS ENVIRONMENT

Figure 1.3 How Luxembourg ranks on *Doing Business* topics



Source: *Doing Business* database.

THE BUSINESS ENVIRONMENT

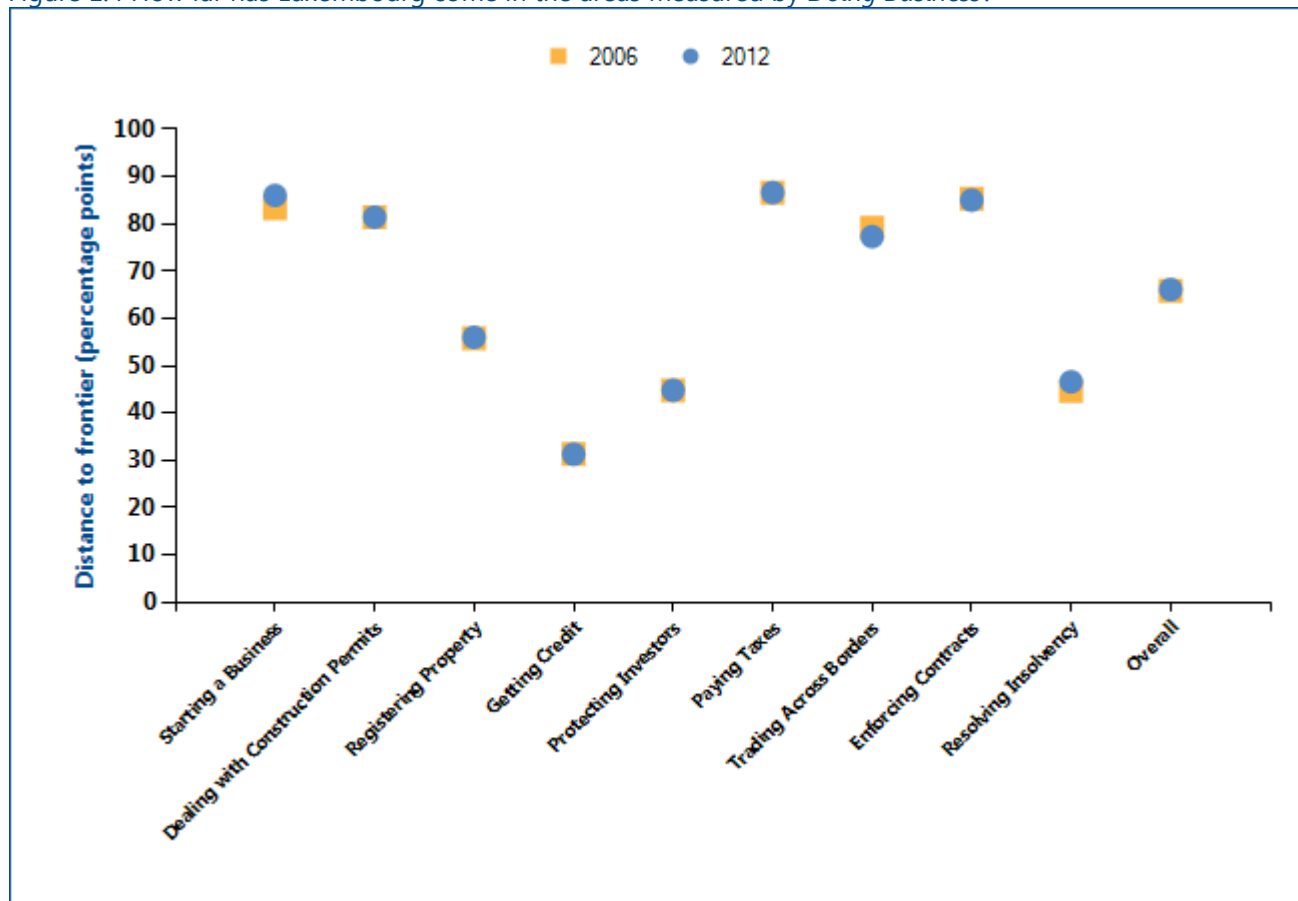
Just as the overall ranking on the ease of doing business tells only part of the story, so do changes in that ranking. Yearly movements in rankings can provide some indication of changes in an economy’s regulatory environment for firms, but they are always relative. An economy’s ranking might change because of developments in other economies. An economy that implemented business regulation reforms may fail to rise in the rankings (or may even drop) if it is passed by others whose business regulation reforms had a more significant impact as measured by *Doing Business*.

Moreover, year-to-year changes in the overall rankings do not reflect how the business regulatory environment in an economy has changed over time—or how it has changed in different areas. To aid in assessing such changes, last

year *Doing Business* introduced the distance to frontier measure. This measure shows how far each economy is from the best performance achieved by any economy since 2005 on each indicator in 9 *Doing Business* indicator sets.

Comparing the measure for an economy at 2 points in time allows users to assess how much the economy’s regulatory environment as measured by *Doing Business* has changed over time—how far it has moved toward (or away from) the most efficient practices and strongest regulations in areas covered by *Doing Business* (figure 1.4). The results may show that the pace of change varies widely across the areas measured. They also may show that an economy is relatively close to the frontier in some areas and relatively far from it in others.

Figure 1.4 How far has Luxembourg come in the areas measured by *Doing Business*?



Note: The distance to frontier measure shows how far on average an economy is from the best performance achieved by any economy on each *Doing Business* indicator since 2005. The measure is normalized to range between 0 and 100, with 100 representing the best performance (the frontier). The overall distance to frontier is the average of the distance to frontier in the 9 indicator sets shown in the figure. See the data notes for more details on the distance to frontier measure.

Source: *Doing Business* database.

THE BUSINESS ENVIRONMENT

The absolute values of the indicators tell another part of the story (table 1.1). The indicators, on their own or in comparison with the indicators of a good practice economy or those of comparator economies in the region, may reveal bottlenecks reflected in large numbers of procedures, long delays or high costs. Or they may reveal unexpected strengths in an area of

business regulation—such as a regulatory process that can be completed with a small number of procedures in a few days and at a low cost. Comparison of the economy's indicators today with those in the previous year may show where substantial bottlenecks persist—and where they are diminishing.

Table 1.1 Summary of *Doing Business* indicators for Luxembourg

Indicator	Luxembourg DB2013	Luxembourg DB2012	Belgium DB2013	Denmark DB2013	France DB2013	Germany DB2013	Netherlands DB2013	Switzerland DB2013	Best performer globally DB2013
Starting a Business (rank)	93	84	44	33	27	106	67	97	New Zealand (1)
Procedures (number)	6	6	3	4	5	9	5	6	New Zealand (1)*
Time (days)	19	19	4	6	7	15	5	18	New Zealand (1)
Cost (% of income per capita)	1.9	1.9	5.2	0.2	0.9	4.9	5.1	2.1	Slovenia (0.0)
Paid-in Min. Capital (% of income per capita)	20.9	21.2	18.2	24.2	0.0	0.0	49.4	26.3	91 Economies (0.0)*
Dealing with Construction Permits (rank)	33	29	57	8	52	14	89	50	Hong Kong SAR, China (1)
Procedures (number)	12	12	11	8	9	9	14	13	Hong Kong SAR, China (6)*
Time (days)	157	157	205	68	184	97	159	154	Singapore (26)
Cost (% of income per capita)	19.2	19.5	54.2	57.1	68.0	48.1	78.9	39.1	Qatar (1.1)

Indicator	Luxembourg DB2013	Luxembourg DB2012	Belgium DB2013	Denmark DB2013	France DB2013	Germany DB2013	Netherlands DB2013	Switzerland DB2013	Best performer globally DB2013
Getting Electricity (rank)	63	60	82	14	42	2	67	8	Iceland (1)
Procedures (number)	5	5	6	4	5	3	5	3	Germany (3)*
Time (days)	120	120	88	38	79	17	143	39	Germany (17)
Cost (% of income per capita)	58.0	58.8	92.6	119.7	43.9	48.3	33.5	61.1	Japan (0.0)
Registering Property (rank)	134	133	176	6	146	81	49	15	Georgia (1)
Procedures (number)	8	8	8	3	8	5	5	4	Georgia (1)*
Time (days)	29	29	64	10	59	40	7	16	Portugal (1)
Cost (% of property value)	10.1	10.1	12.7	0.6	6.1	5.7	6.1	0.4	Belarus (0.0)*
Getting Credit (rank)	159	158	70	23	53	23	53	23	United Kingdom (1)*
Strength of legal rights index (0-10)	5	5	6	9	7	7	6	8	Malaysia (10)*
Depth of credit information index (0-6)	0	0	4	4	4	6	5	5	United Kingdom (6)*
Public registry coverage (% of adults)	0.0	0.0	89.0	0.0	42.4	1.3	0.0	0.0	Portugal (90.7)
Private bureau coverage (% of adults)	0.0	0.0	0.0	7.3	0.0	100.0	81.7	26.8	United Kingdom (100.0)*
Protecting Investors (rank)	128	124	19	32	82	100	117	169	New Zealand (1)
Extent of disclosure	6	6	8	7	10	5	4	0	Hong Kong SAR,

Indicator	Luxembourg DB2013	Luxembourg DB2012	Belgium DB2013	Denmark DB2013	France DB2013	Germany DB2013	Netherlands DB2013	Switzerland DB2013	Best performer globally DB2013
index (0-10)									China (10)*
Extent of director liability index (0-10)	4	4	6	5	1	5	4	5	Singapore (9)*
Ease of shareholder suits index (0-10)	3	3	7	7	5	5	6	4	New Zealand (10)*
Strength of investor protection index (0-10)	4.3	4.3	7.0	6.3	5.3	5.0	4.7	3.0	New Zealand (9.7)
Paying Taxes (rank)	14	15	75	13	53	72	29	18	United Arab Emirates (1)
Payments (number per year)	23	23	11	10	7	9	9	19	Hong Kong SAR, China (3)*
Time (hours per year)	59	59	156	130	132	207	127	63	United Arab Emirates (12)
Trading Across Borders (rank)	32	33	29	4	27	13	12	35	Singapore (1)
Documents to export (number)	5	5	4	4	2	4	4	4	France (2)
Time to export (days)	7	7	9	5	9	7	6	8	Singapore (5)*
Cost to export (US\$ per container)	1,420	1,420	1,230	744	1,078	872	895	1,435	Malaysia (435)
Documents to import (number)	4	4	5	3	2	5	4	5	France (2)
Time to import (days)	7	7	9	5	11	7	6	9	Singapore (4)
Cost to import (US\$ per container)	1,420	1,420	1,400	744	1,248	937	975	1,440	Malaysia (420)

Indicator	Luxembourg DB2013	Luxembourg DB2012	Belgium DB2013	Denmark DB2013	France DB2013	Germany DB2013	Netherlands DB2013	Switzerland DB2013	Best performer globally DB2013
Enforcing Contracts (rank)	1	1	18	34	8	5	32	20	Luxembourg (1)
Time (days)	321	321	505	410	390	394	514	390	Singapore (150)
Cost (% of claim)	9.7	9.7	17.7	23.3	17.4	14.4	23.9	24.0	Bhutan (0.1)
Procedures (number)	26	26	26	35	29	30	26	32	Ireland (21)*
Resolving Insolvency (rank)	52	50	7	10	43	19	6	45	Japan (1)
Time (years)	2.0	2.0	0.9	1.0	1.9	1.2	1.1	3.0	Ireland (0.4)
Cost (% of estate)	15	15	4	4	9	8	4	4	Singapore (1)*
Outcome (0 as piecemeal sale and 1 as going concern)	0		1	1	0	1	1	0	
Recovery rate (cents on the dollar)	43.5	43.5	88.7	87.1	48.4	78.1	88.8	47.5	Japan (92.8)

Note: DB2012 rankings shown are not last year's published rankings but comparable rankings for DB2012 that capture the effects of such factors as data corrections and the addition of 2 economies (Barbados and Malta) to the sample this year. The ranking methodology for the paying taxes indicators changed in *Doing Business 2013*; see the data notes for details. For more information on "no practice" marks, see the data notes. Data for the outcome of the resolving insolvency indicator are not available for DB2012.

* Two or more economies share the top ranking on this indicator. A number shown in place of an economy's name indicates the number of economies that share the top ranking on the indicator. For a list of these economies, see the *Doing Business* website (<http://www.doingbusiness.org>).

Source: *Doing Business* database.

STARTING A BUSINESS

Formal registration of companies has many immediate benefits for the companies and for business owners and employees. Legal entities can outlive their founders. Resources are pooled as several shareholders join forces to start a company. Formally registered companies have access to services and institutions from courts to banks as well as to new markets. And their employees can benefit from protections provided by the law. An additional benefit comes with limited liability companies. These limit the financial liability of company owners to their investments, so personal assets of the owners are not put at risk. Where governments make registration easy, more entrepreneurs start businesses in the formal sector, creating more good jobs and generating more revenue for the government.

What do the indicators cover?

Doing Business measures the ease of starting a business in an economy by recording all procedures officially required or commonly done in practice by an entrepreneur to start up and formally operate an industrial or commercial business—as well as the time and cost required to complete these procedures. It also records the paid-in minimum capital that companies must deposit before registration (or within 3 months). The ranking on the ease of starting a business is the simple average of the percentile rankings on the 4 component indicators: procedures, time, cost and paid-in minimum capital requirement.

To make the data comparable across economies, *Doing Business* uses several assumptions about the business and the procedures. It assumes that all information is readily available to the entrepreneur and that there has been no prior contact with officials. It also assumes that the entrepreneur will pay no bribes. And it assumes that the business:

- Is a limited liability company, located in the largest business city.
- Has between 10 and 50 employees.
- Conducts general commercial or industrial activities.

WHAT THE STARTING A BUSINESS INDICATORS MEASURE

Procedures to legally start and operate a company (number)

- Preregistration (for example, name verification or reservation, notarization)
- Registration in the economy's largest business city
- Postregistration (for example, social security registration, company seal)

Time required to complete each procedure (calendar days)

- Does not include time spent gathering information
- Each procedure starts on a separate day
- Procedure completed once final document is received
- No prior contact with officials

Cost required to complete each procedure (% of income per capita)

- Official costs only, no bribes
- No professional fees unless services required by law

Paid-in minimum capital (% of income per capita)

- Deposited in a bank or with a notary before registration (or within 3 months)
- Has a start-up capital of 10 times income per capita.
- Has a turnover of at least 100 times income per capita.
- Does not qualify for any special benefits.
- Does not own real estate.
- Is 100% domestically owned.

STARTING A BUSINESS

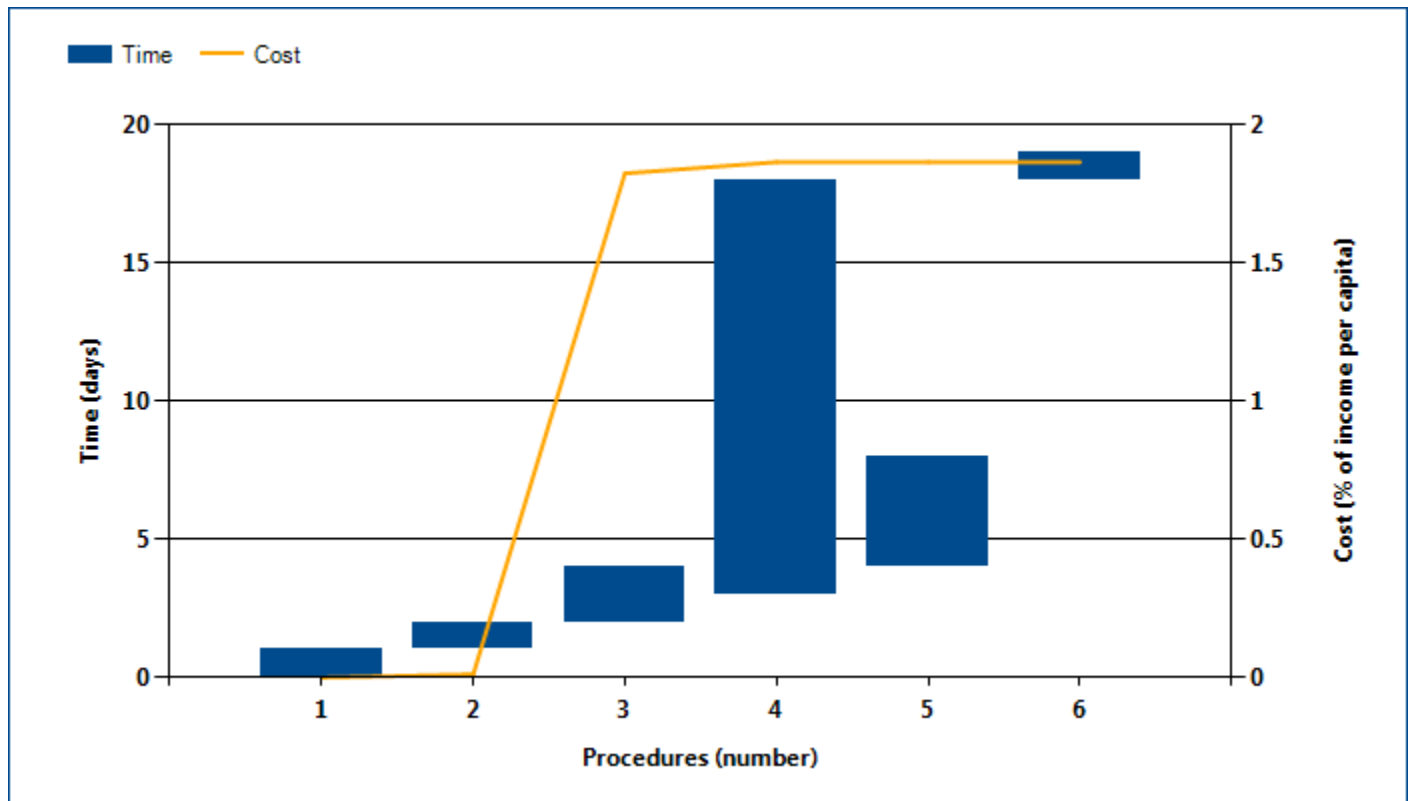
Where does the economy stand today?

What does it take to start a business in Luxembourg? According to data collected by *Doing Business*, starting a business there requires 6 procedures, takes 19 days,

costs 1.9% of income per capita and requires paid-in minimum capital of 20.9% of income per capita (figure 2.1).

Figure 2.1 What it takes to start a business in Luxembourg

Paid-in minimum capital (% of income per capita): 20.9



Note: Time shown in the figure above may not reflect simultaneity of procedures. For more information on the methodology of the starting a business indicators, see the *Doing Business* website (<http://www.doingbusiness.org>). For details on the procedures reflected here, see the summary at the end of this chapter.

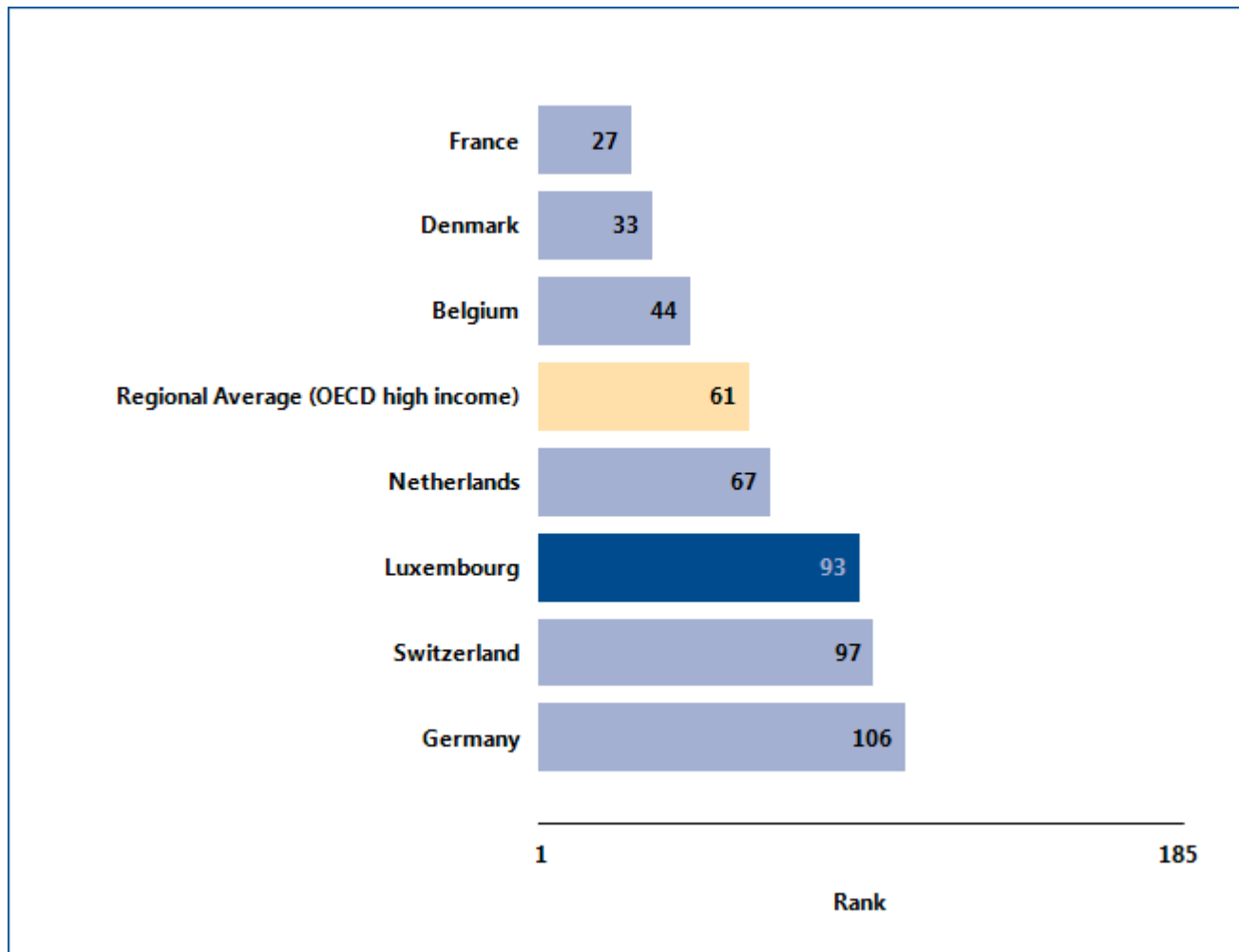
Source: *Doing Business* database.

STARTING A BUSINESS

Globally, Luxembourg stands at 93 in the ranking of 185 economies on the ease of starting a business (figure 2.2). The rankings for comparator economies

and the regional average ranking provide other useful information for assessing how easy it is for an entrepreneur in Luxembourg to start a business.

Figure 2.2 How Luxembourg and comparator economies rank on the ease of starting a business



Source: *Doing Business* database.

STARTING A BUSINESS

What are the changes over time?

While the most recent *Doing Business* data reflect how easy (or difficult) it is to start a business in Luxembourg today, data over time show which aspects of the process have changed—and which have not (table 2.1). That can help identify where the potential for improvement is greatest.

Table 2.1 The ease of starting a business in Luxembourg over time
By *Doing Business* report year

Indicator	DB2004	DB2005	DB2006	DB2007	DB2008	DB2009	DB2010	DB2011	DB2012	DB2013
Rank	..	..	..	..	..	..	..	..	84	93
Procedures (number)	n.a.	n.a.	n.a.	6	6	6	6	6	6	6
Time (days)	n.a.	n.a.	n.a.	26	26	26	24	19	19	19
Cost (% of income per capita)	n.a.	n.a.	n.a.	11.9	10.8	6.5	1.8	2.1	1.9	1.9
Paid-in Min. Capital (% of income per capita)	n.a.	n.a.	n.a.	22.7	20.5	21.3	19.9	23.8	21.2	20.9

Note: n.a. = not applicable (the economy was not included in *Doing Business* for that year). DB2012 rankings shown are not last year's published rankings but comparable rankings for DB2012 that capture the effects of such factors as data corrections and the addition of 2 economies (Barbados and Malta) to the sample this year.

Source: *Doing Business* database.

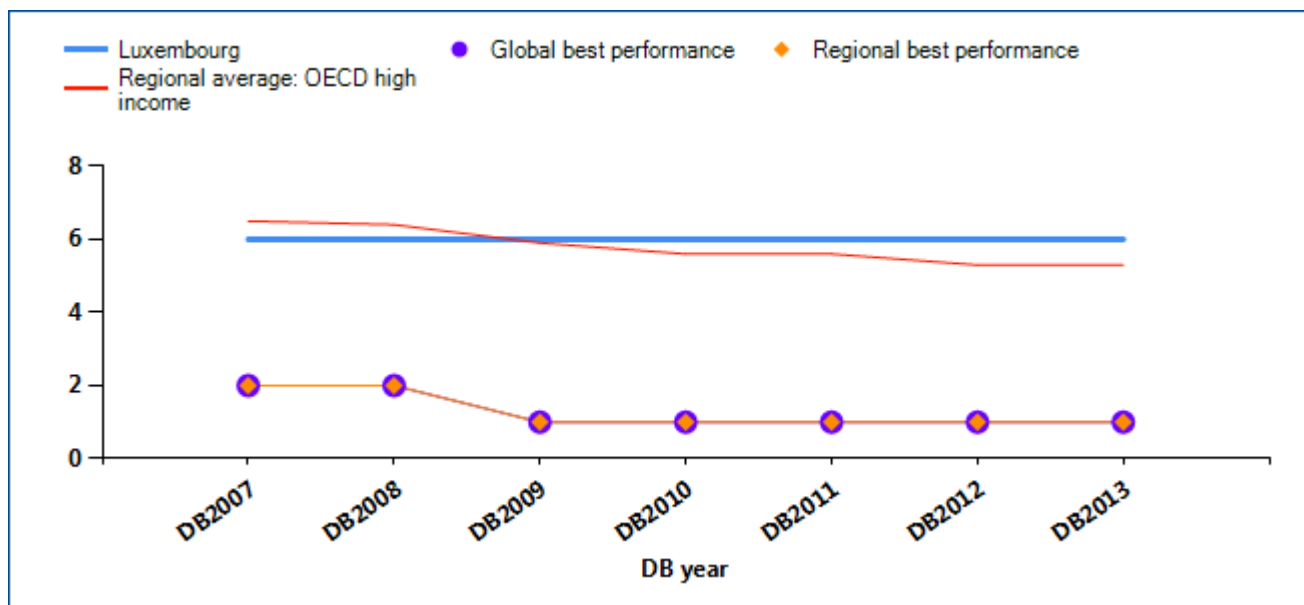
STARTING A BUSINESS

Equally helpful may be the benchmarks provided by the economies that over time have had the best performance regionally or globally on the procedures, time, cost or paid-in minimum capital required to start a business (figure 2.3). These benchmarks help show

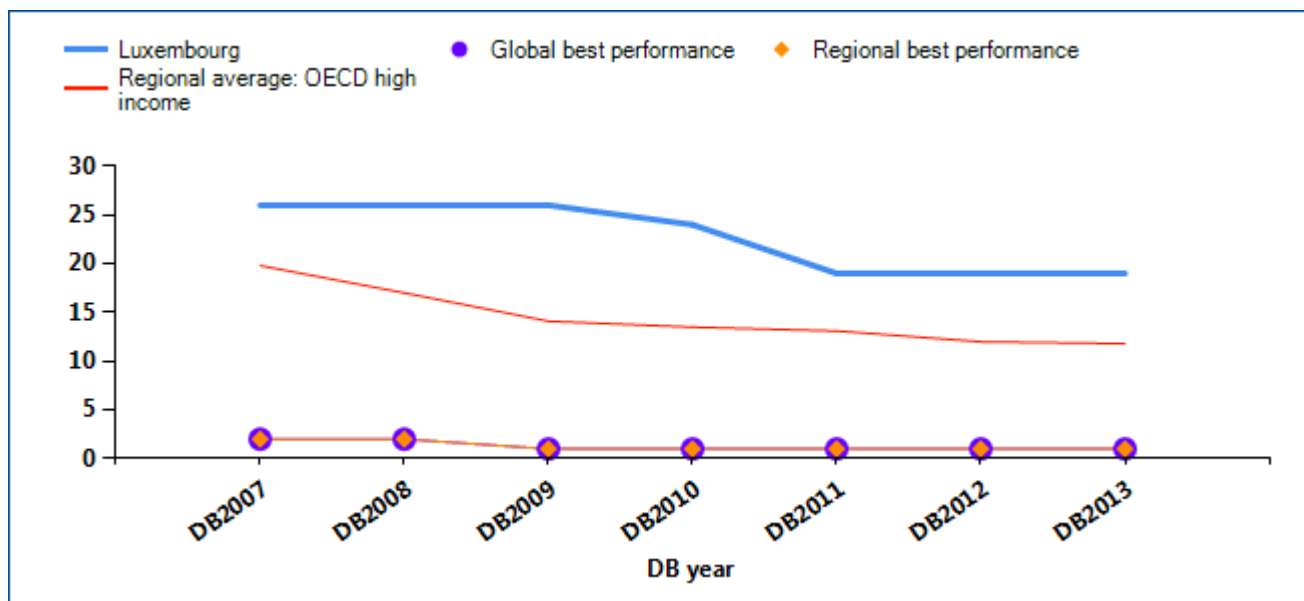
what is possible in making it easier to start a business. And changes in regional averages can show where Luxembourg is keeping up—and where it is falling behind.

Figure 2.3 Has starting a business become easier over time?

Procedures (number)

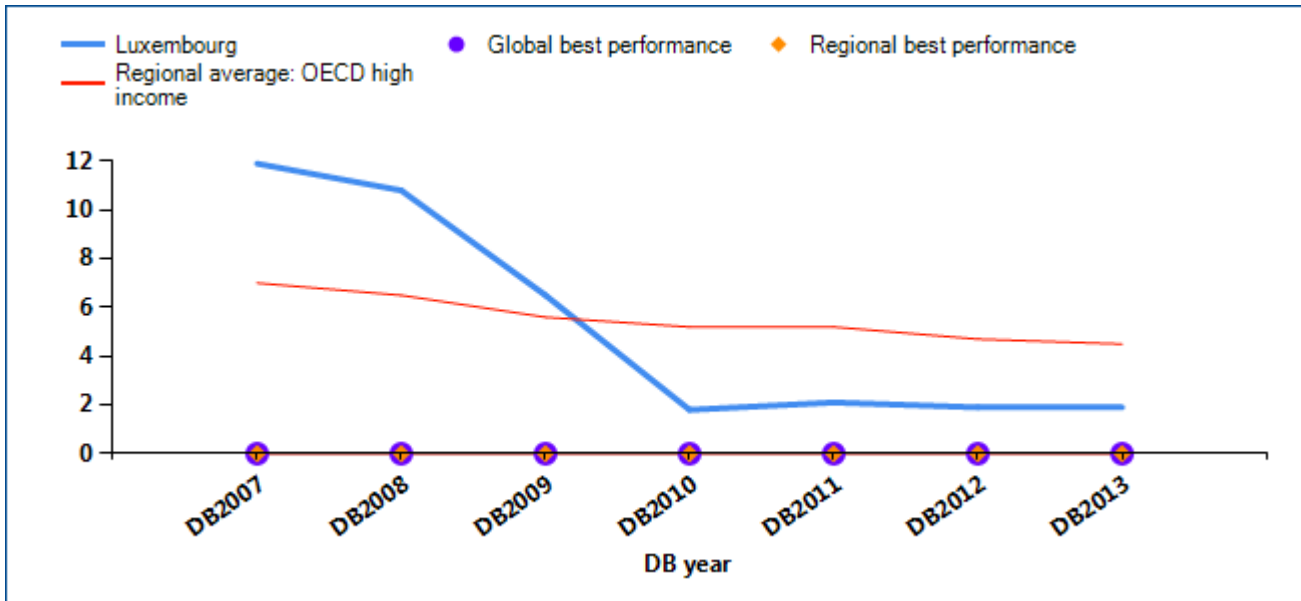


Time (days)

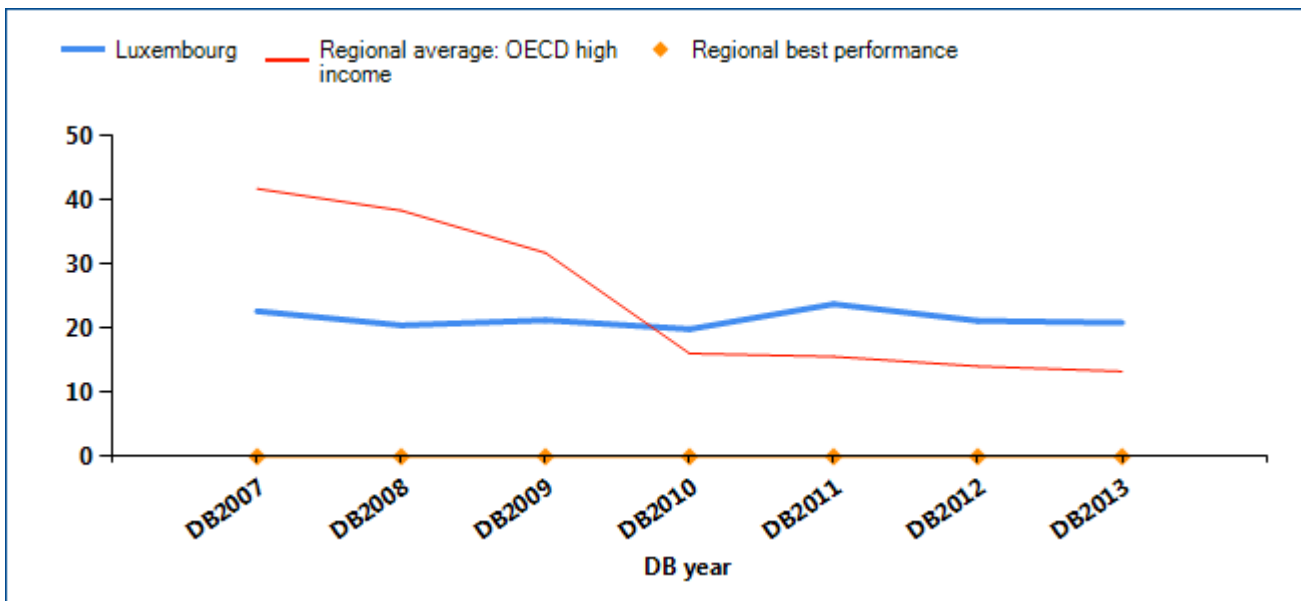


STARTING A BUSINESS

Cost (% of income per capita)



Paid-in minimum capital (% of income per capita)



Note: Ninety-one economies globally have no paid-in minimum capital requirement.

Source: Doing Business database.

STARTING A BUSINESS

Economies around the world have taken steps making it easier to start a business—streamlining procedures by setting up a one-stop shop, making procedures simpler or faster by introducing technology and reducing or eliminating minimum capital requirements. Many have undertaken business registration reforms in stages—and they often are part of a larger regulatory reform program. Among the benefits have been

greater firm satisfaction and savings and more registered businesses, financial resources and job opportunities.

What business registration reforms has *Doing Business* recorded in Luxembourg (table 2.2)?

Table 2.2 How has Luxembourg made starting a business easier—or not?
By *Doing Business* report year

DB year	Reform
DB2008	No reform as measured by Doing Business.
DB2009	No reform as measured by Doing Business.
DB2010	Luxembourg eased business start-up process by making it possible to reserve a company name online and abolishing capital duties.
DB2011	Luxembourg eased business start-up by speeding up the delivery of the business license.
DB2012	No reform as measured by Doing Business.
DB2013	No reform as measured by Doing Business.

Note: For information on reforms in earlier years (back to DB2005), see the *Doing Business* reports for these years, available at <http://www.doingbusiness.org>.

Source: *Doing Business* database.

STARTING A BUSINESS

What are the details?

Underlying the indicators shown in this chapter for Luxembourg is a set of specific procedures—the bureaucratic and legal steps that an entrepreneur must complete to incorporate and register a new firm. These are identified by *Doing Business* through collaboration with relevant local professionals and the study of laws, regulations and publicly available information on business entry in that economy. Following is a detailed summary of those procedures, along with the associated time and cost. These procedures are those that apply to a company matching the standard assumptions (the “standardized company”) used by *Doing Business* in collecting the data (see the section in this chapter on what the indicators measure).

STANDARDIZED COMPANY

City: Luxembourg

Legal Form: Société a Responsabilité Limitée (SARL)

Paid in Minimum Capital Requirement: EUR 12,395

Start-up Capital: 10 times GNI per capita

Summary of procedures for starting a business in Luxembourg—and the time and cost

No.	Procedure	Time to complete	Cost to complete
1	<p>Deposit the minimum capital requirement</p> <p>The promoters must open a bank account in the name of the company in formation and must transfer the amount of the share capital to this account before the passing of the deed of incorporation. For the purpose of the passing of the notarial deed, the bank will remit an escrow certificate (certificat de blocage) certifying that the funds corresponding to the amount of the share capital are “blocked” in the bank account. The funds are automatically unblocked on delivery of a certified copy of the notarial deed of incorporation and the issue by the notary of the release certificate (certificat de déblocage).</p>	1 day	no charge
2	<p>Verify uniqueness of company name and reserve name</p> <p>Shareholders are free to choose the company’s name but must ensure that it is unique. Uniqueness can be verified with the Trade and Companies Register. The Register rejects the registration of a company if the name already exists. However, company names cannot be reserved with the Trade and Companies Register. The company name may include the name of the shareholders or may assume a corporate name. In practice, the notary public checks and reserves the proposed company name with the Commercial Register. An electronic certificate in a PDF form certifying that the company’s name is available within 24 hours from the Trade and Companies Register.</p>	1 day	EUR 4.75 to EUR 9.75
3	<p>Notary drafts and notarizes the company deed</p> <p>A private limited liability company must be incorporated before a Luxembourg notary public. The Luxembourg notary draws up the deed</p>	2 days	EUR 1,000+ EUR 75 fixed registration fee

No.	Procedure	Time to complete	Cost to complete
	<p>of incorporation which includes the articles of association of the company. Model of articles of association may be found on Internet (the national Chamber of Commerce's Espace Entreprises information center can help incorporators to complete the model of documents). The Luxembourg notary is held by law to pay all the costs relating to the incorporation and registration of the company and which include, the notary fees EUR 450 (fee EUR 150 + sundry expenses EUR 200 + certified copies EUR 100); Company Register fees EUR 250; Publication in Official Gazette EUR 250; Sundries EUR 50. The notary must provide a detailed account/invoice once the company is incorporated.</p>		
<p>4</p>	<p>* Apply for business license</p> <p>Commercial activities require a business licence/establishment permit. This licence/permit is issued by the Ministry of the Economy and Foreign Trade upon request and on proof of knowledge of business management.</p> <p>All commercial (i.e. trade and services not linked to professions) and industrial activities, skilled (craft) trade and some regulated (liberal) professions require a business licence (autorisation d'établissement / establishment permit).</p> <p>To apply for a business license, promoters must submit the following documents:</p> <ul style="list-style-type: none"> • Application form (completed and signed) for an establishment permit. • Tax stamp for EUR 24 EUR (This varies from EUR 24 to EUR 2,500, depending on the type of activity. 24 EUR refers to a sales/trade company). The amount can be transferred to the national Giro account (CCP) of the Registration and Domains Administration (Administration de l'Enregistrement et des Domaines): LU47 1111 0087 9262 0000, with the reference: "Office Fee for Establishment Permit [ENTER APPLICANT'S NAME]." In this case, proof of payment must be presented. The tax stamp can also be obtained from the Espace Entreprises information center. • For non-residents and persons residing in Luxembourg for fewer than 10 years, a recent notarized certificate of nonbankruptcy. • Articles of association (executed or draft) for a commercial company. • School certificates or professional diplomas (certified by the institution) required for the intended activity. Otherwise, proof of relevant professional experience such as an EU certificate or certificate of registration with a social security authority. • An affidavit on the exercise of any management posts previously held in Luxembourg, for verification of nonbankruptcy. • The applicant's identity card (copy). • The applicant's police record or affidavit. Note: This applies to non-residents and persons residing in Luxembourg for less than 10 years. In practice, the Ministry of the Economy and Foreign Trade tends however to request the provision of a police record or affidavit to every applicant although not required as such. <p>The business permit application can be submitted before executing the</p>	<p>15 days, (simultaneous with procedure 3)</p>	<p>EUR 24</p>

No.	Procedure	Time to complete	Cost to complete
	<p>notary deed because the Ministry of the Economy and Foreign Trade checks the draft articles of association—the company name, business purpose, and identity of directors and officers for compliance with the provisions of the applicable law. Generally, the business licence/establishment permit application and notary deed processes start more or less at the same time and are pursued simultaneously. Although the company incorporation process requires a notary, the founder may directly register the company with different administrations and obtain identification numbers and the business license/establishment permit.</p> <p>Since october 2011, business licence requests can be handed in online at www.guichet.lu. The required documents are the same ones. They all need to be transformed into a PDF and attached to the online form. In order to be able to deposit the business licence online, the applicant is required to have a LUXTRUST certificate in order to sign the application form electronically. For non-residents that do not possess a LUXTRUST Certificate, the documents can also be sent to the Espace Entreprises of the Chamber of Commerce who will then deposit the file for the applicant. This enables people from everywhere all over the world to apply for a business licence without having to travel to Luxembourg. In the future, international signing certificates will be accepted by the online service.</p>		
<p>5</p>	<p>* Register at the one-stop shop</p> <p>The notary public must levy an initial payment for all applicable company incorporation fees and taxes, including registration costs. The notary must register (a) the articles of association with the tax administration (Administration de l'Enregistrement) at the Registry one-stop shop; and (b) the company with the Trade and Companies Register, within 4 weeks of the incorporation of the company. The Trade and Companies Register arranges for the publication of the incorporation deed in the Official Gazette within 2 months of the company's registration.</p> <p>Upon usually 24 hours of the registration, the Trade and Companies Register generates an administrative or official (register) number that accompanies the company during its corporate life (matricule). This number forms the basis for all other identification numbers to be issued by the administration for direct taxes (tax number), the administration for indirect taxes (VAT number), or the social security service (pay-as-you-earn number and employer number). Applications can be filed for both VAT and social security at the one-stop, which distributes the forms to the relevant administrations. The company's registration with the Chamber of Commerce is done automatically.</p>	<p>4 days, (simultaneous with procedure 4)</p>	<p>included in procedure 3</p>
<p>6</p>	<p>Unblock the authorized capital</p> <p>Once the company is incorporated, the notary public immediately issues a release certificate (certificat de déblocage), indicating that the company has come into existence. This certificate will be sent to the bank, together with a copy of the incorporation deed, for the release of the funds corresponding to the share capital.</p>	<p>1 day</p>	<p>no charge</p>

* Takes place simultaneously with another procedure.
Source: *Doing Business* database.

DEALING WITH CONSTRUCTION PERMITS

Regulation of construction is critical to protect the public. But it needs to be efficient, to avoid excessive constraints on a sector that plays an important part in every economy. Where complying with building regulations is excessively costly in time and money, many builders opt out. They may pay bribes to pass inspections or simply build illegally, leading to hazardous construction that puts public safety at risk. Where compliance is simple, straightforward and inexpensive, everyone is better off.

What do the indicators cover?

Doing Business records the procedures, time and cost for a business to obtain all the necessary approvals to build a simple commercial warehouse in the economy's largest business city, connect it to basic utilities and register the property so that it can be used as collateral or transferred to another entity.

The ranking on the ease of dealing with construction permits is the simple average of the percentile rankings on its component indicators: procedures, time and cost.

To make the data comparable across economies, *Doing Business* uses several assumptions about the business and the warehouse, including the utility connections.

The business:

- Is a limited liability company operating in the construction business and located in the largest business city.
- Is domestically owned and operated.
- Has 60 builders and other employees.

The warehouse:

- Is a new construction (there was no previous construction on the land).
- Has complete architectural and technical plans prepared by a licensed architect.

WHAT THE DEALING WITH CONSTRUCTION PERMITS INDICATORS MEASURE

Procedures to legally build a warehouse (number)

Submitting all relevant documents and obtaining all necessary clearances, licenses, permits and certificates

Completing all required notifications and receiving all necessary inspections

Obtaining utility connections for water, sewerage and a fixed telephone line

Registering the warehouse after its completion (if required for use as collateral or for transfer of the warehouse)

Time required to complete each procedure (calendar days)

Does not include time spent gathering information

Each procedure starts on a separate day

Procedure completed once final document is received

No prior contact with officials

Cost required to complete each procedure (% of income per capita)

Official costs only, no bribes

- Will be connected to water, sewerage (sewage system, septic tank or their equivalent) and a fixed telephone line. The connection to each utility network will be 10 meters (32 feet, 10 inches) long.
- Will be used for general storage, such as of books or stationery (not for goods requiring special conditions).
- Will take 30 weeks to construct (excluding all delays due to administrative and regulatory requirements).

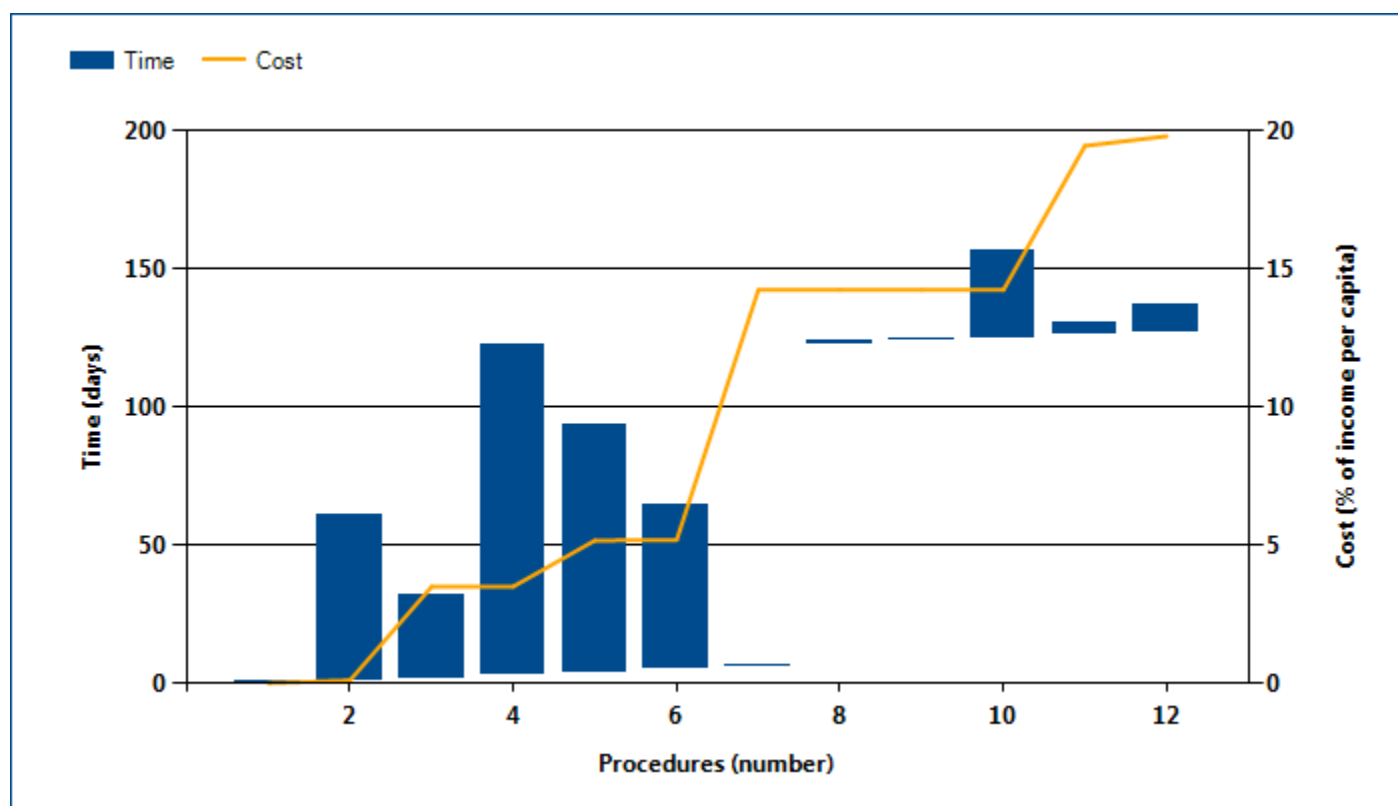
DEALING WITH CONSTRUCTION PERMITS

Where does the economy stand today?

What does it take to comply with the formalities to build a warehouse in Luxembourg? According to data collected by *Doing Business*, dealing with construction

permits there requires 12 procedures, takes 157 days and costs 19.2% of income per capita (figure 3.1).

Figure 3.1 What it takes to comply with formalities to build a warehouse in Luxembourg



Note: Time shown in the figure above may not reflect simultaneity of procedures. For more information on the methodology of the dealing with construction permits indicators, see the *Doing Business* website (<http://www.doingbusiness.org>). For details on the procedures reflected here, see the summary at the end of this chapter.

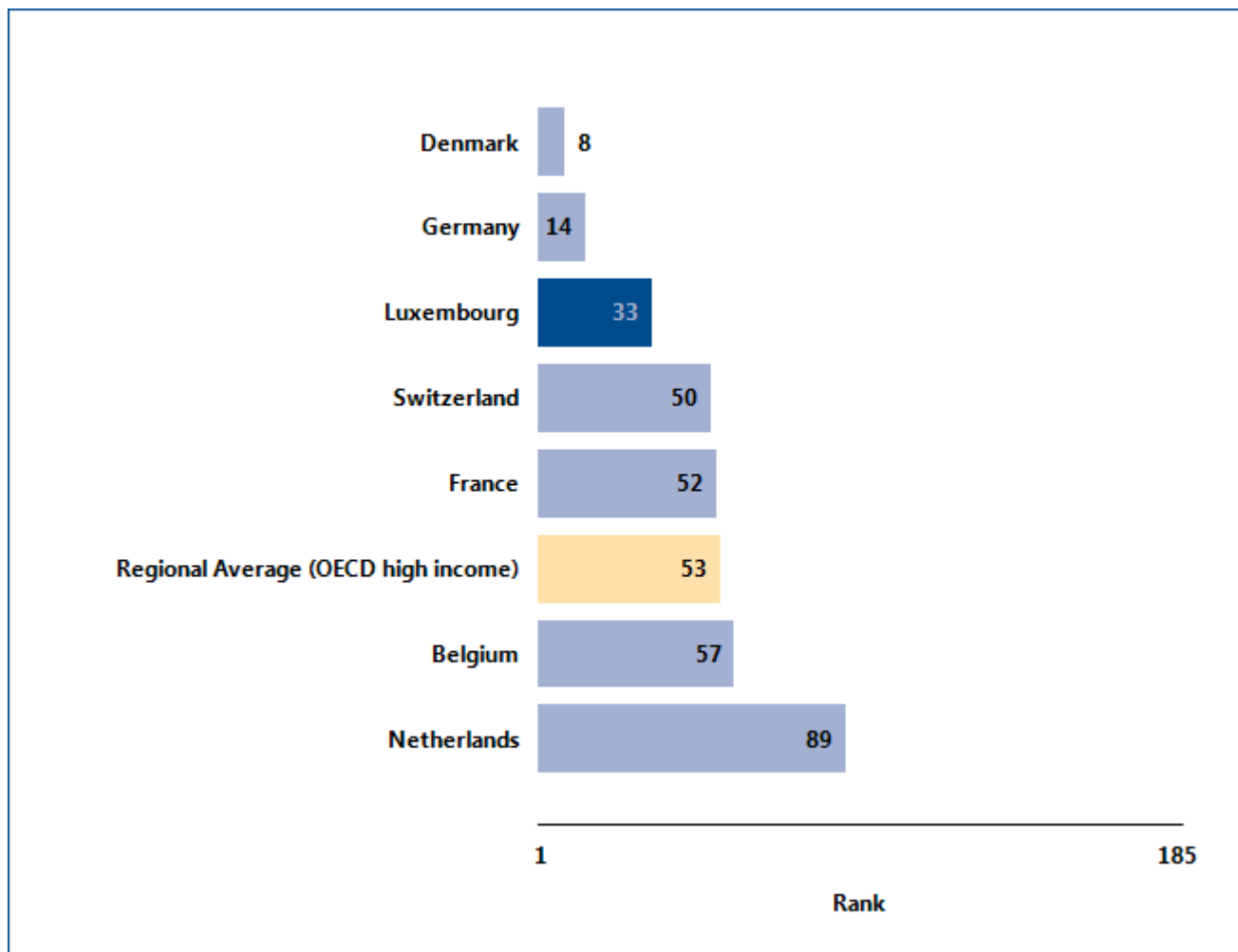
Source: *Doing Business* database.

DEALING WITH CONSTRUCTION PERMITS

Globally, Luxembourg stands at 33 in the ranking of 185 economies on the ease of dealing with construction permits (figure 3.2). The rankings for comparator economies and the regional average

ranking provide other useful information for assessing how easy it is for an entrepreneur in Luxembourg to legally build a warehouse.

Figure 3.2 How Luxembourg and comparator economies rank on the ease of dealing with construction permits



Source: Doing Business database.

DEALING WITH CONSTRUCTION PERMITS

What are the changes over time?

While the most recent *Doing Business* data reflect how easy (or difficult) it is to deal with construction permits in Luxembourg today, data over time show which aspects of the process have changed—and which have not (table 3.1). That can help identify where the potential for improvement is greatest.

Table 3.1 The ease of dealing with construction permits in Luxembourg over time
By *Doing Business* report year

Indicator	DB2006	DB2007	DB2008	DB2009	DB2010	DB2011	DB2012	DB2013
Rank	..	..	..	..	..	..	29	33
Procedures (number)	n.a.	12	12	12	12	12	12	12
Time (days)	n.a.	157	157	157	157	157	157	157
Cost (% of income per capita)	n.a.	19.6	17.8	18.3	18.4	21.9	19.5	19.2

Note: n.a. = not applicable (the economy was not included in *Doing Business* for that year). DB2012 rankings shown are not last year's published rankings but comparable rankings for DB2012 that capture the effects of such factors as data corrections and the addition of 2 economies (Barbados and Malta) to the sample this year. For more information on "no practice" marks, see the data notes.

Source: *Doing Business* database.

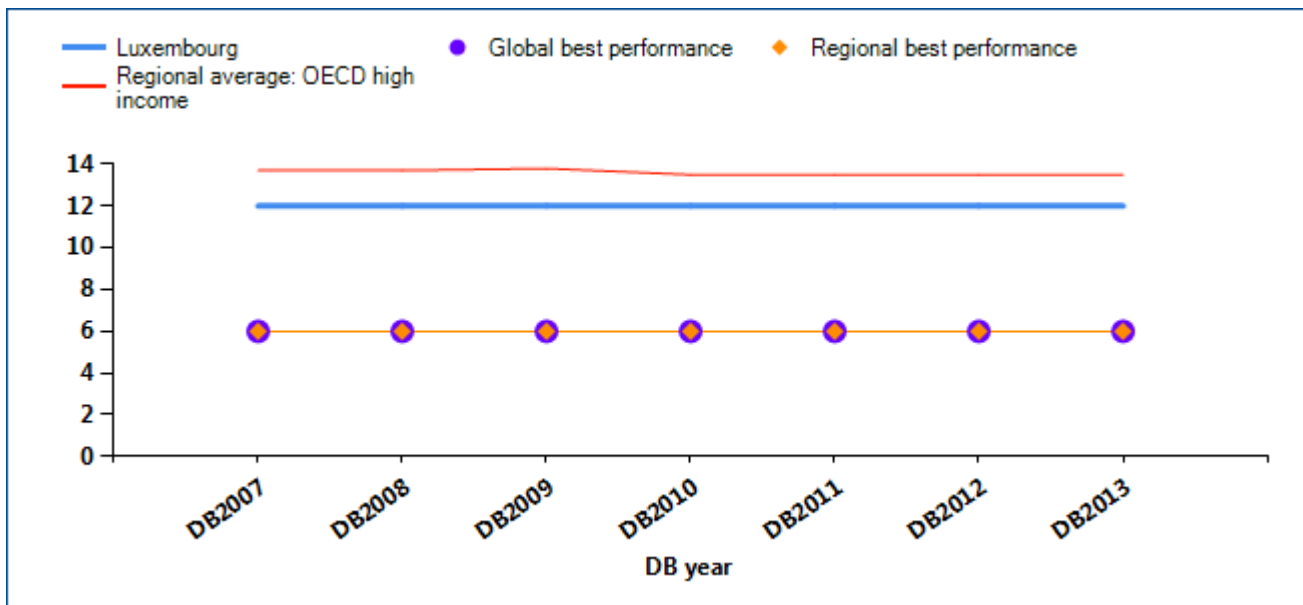
DEALING WITH CONSTRUCTION PERMITS

Equally helpful may be the benchmarks provided by the economies that over time have had the best performance regionally or globally on the procedures, time or cost required to deal with construction permits (figure 3.3). These benchmarks help show what is

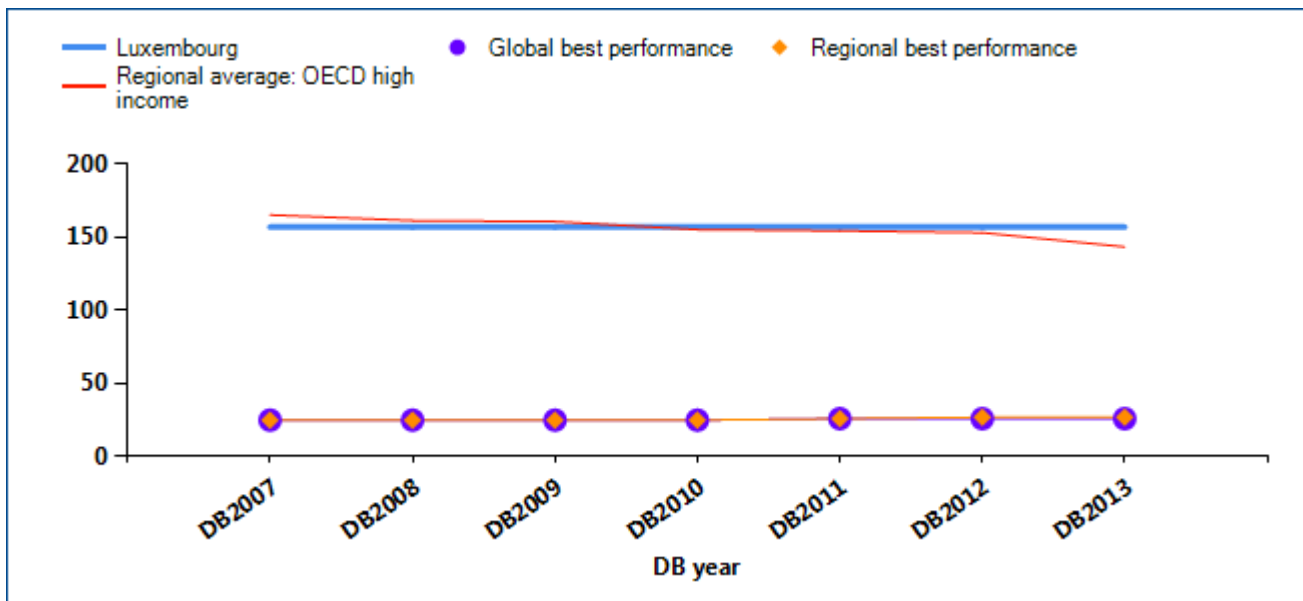
possible in making it easier to deal with construction permits. And changes in regional averages can show where Luxembourg is keeping up—and where it is falling behind.

Figure 3.3 Has dealing with construction permits become easier over time?

Procedures (number)

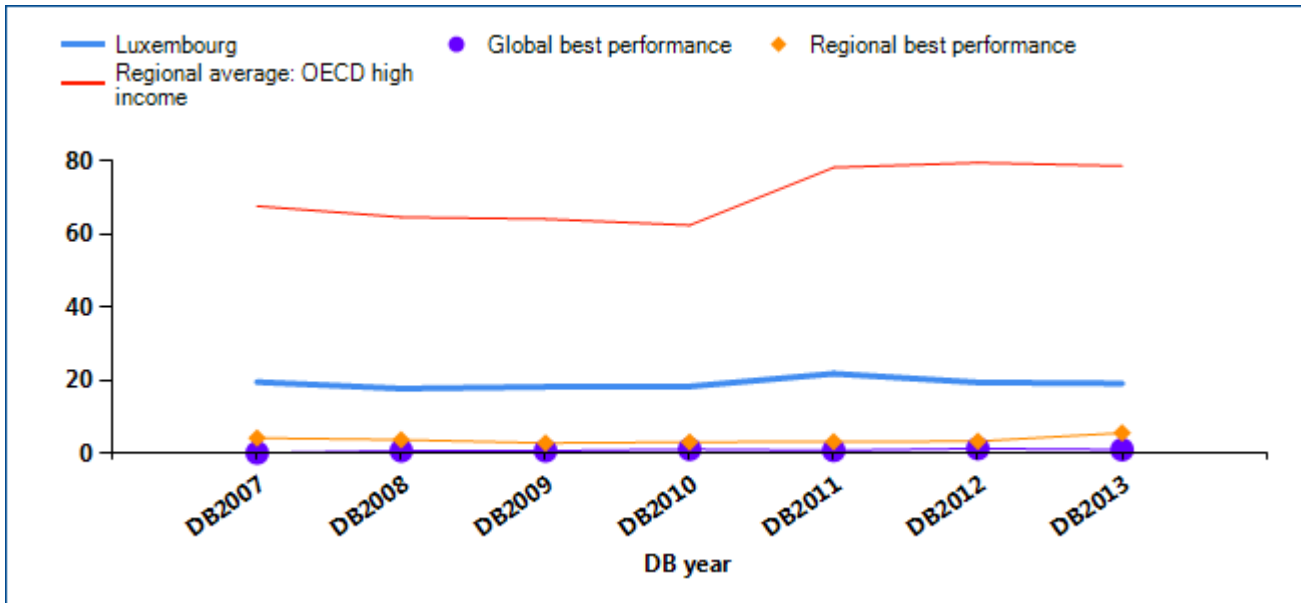


Time (days)



DEALING WITH CONSTRUCTION PERMITS

Cost (% of income per capita)



Source: Doing Business database.

DEALING WITH CONSTRUCTION PERMITS

Smart regulation ensures that standards are met while making compliance easy and accessible to all. Coherent and transparent rules, efficient processes and adequate allocation of resources are especially important in sectors where safety is at stake. Construction is one of them. In an effort to ensure

building safety while keeping compliance costs reasonable, governments around the world have worked on consolidating permitting requirements. What construction permitting reforms has *Doing Business* recorded in Luxembourg (table 3.2)?

Table 3.2 How has Luxembourg made dealing with construction permits easier—or not?

By *Doing Business* report year

DB year	Reform
DB2008	No reform as measured by Doing Business.
DB2009	No reform as measured by Doing Business.
DB2010	No reform as measured by Doing Business.
DB2011	No reform as measured by Doing Business.
DB2012	No reform as measured by Doing Business.
DB2013	No reform as measured by Doing Business.

Note: For information on reforms in earlier years (back to DB2006), see the *Doing Business* reports for these years, available at <http://www.doingbusiness.org>.

Source: *Doing Business* database.

DEALING WITH CONSTRUCTION PERMITS

What are the details?

The indicators reported here for Luxembourg are based on a set of specific procedures—the steps that a company must complete to legally build a warehouse—identified by *Doing Business* through information collected from experts in construction licensing, including architects, construction lawyers, construction firms, utility service providers and public officials who deal with building regulations. These procedures are those that apply to a company and structure matching the standard assumptions used by *Doing Business* in collecting the data (see the section in this chapter on what the indicators cover).

BUILDING A WAREHOUSE

City : Luxembourg

Estimated Warehouse Value : EUR 1,040,000

The procedures, along with the associated time and cost, are summarized below.

Summary of procedures for dealing with construction permits in Luxembourg —and the time and cost

No.	Procedure	Time to complete	Cost to complete
1	Obtain a recent copy of the cadastre plans from the Cadastre Administration	1 day	EUR 10
2	Obtain approval in principle (accord de principe) An agreement in principle is required for any building with total built area of more than 2,000 cubic meters. Article 57: Application for authorization and declaration of work - 57.2.2. and 57.2.1, This agreement is valid for a period of 12 months. The final request must be submitted within the deadline.	60 days	EUR 60
3	* Obtain feasibility study for the sewage (canalization) connection BuildCo applies for a sewage connection online. The following Plans and documents must be attached in duplicate: (i) an extract of the cadastral map (ii) the location map of the land and any building or structure (or erect),scale 1:500 (iii) plans for all levels of the building, scale 1:100 or 1:50 (iv) Construction cuts along the plan of the connecting line, scale1:100 or 1:50, indicating the location of the network and the level of public sewers The Construction permit is valid only if a Sewage connection authorization has been granted.	30 days	EUR 1,950
4	* Obtain Commodo/Incommodo Classe 3 approval from the	120 days	no charge

No.	Procedure	Time to complete	Cost to complete
	<p>Environment Department</p> <p>An environmental clearance is required if the warehouse is to be used for storing greater than 10 tons but less than or equivalent to 100 tons.</p>		
5	<p>* Obtain Construction Permit from the Urban Department (service de l'urbanisme) of the Commune</p> <p>The building plans must be conform to the master plan of the city of Luxembourg. The application file comprises an application form, a cadastral extract, and the building design plans. Various departments within the Commune must approve the application, including all the utility and the fire safety departments. The Commune charges EUR 24 as an application processing fee and EUR 0.24 per cubic meter. If after 12 months construction has not started, the permit will be nullified.</p> <p>The Construction permit is valid only if a Sewage connection authorization has been granted.</p>	90 days	EUR 960
6	<p>* Obtain excavation permit from the Ministry of Works</p> <p>Assuming the warehouse is to be built near a main road, BuildCo must obtain an excavation permit to dig for utility connections. The Ministry of Public Works charges a stamp duty of EUR 10.</p>	60 days	EUR 10
7	<p>* Hire independent surveillance company to carry out inspections of construction works</p> <p>BuildCo must hire an independent inspection company to perform inspections during construction, which costs about 0.5% of construction value.</p>	1 day	EUR 5,200
8	<p>Request and receive inspection of completed works from the Environmental Administration</p> <p>In accordance with Article 66: Building Code, an application must be made to the Police des Batisses when the major construction works is completed.</p> <p>The authorization shall be deemed received if within three weeks after the formulation of the relevant application "La police des Batisses" has not raised any objections in writing. Without this authorization, making internal works cannot be completed.</p>	1 day	no charge
9	<p>Request and receive sewage (canalization) inspection</p>	1 day	no charge
10	<p>* Obtain sewage (canalization) connection</p> <p>BuildCo applies for a sewerage connection and requests water services from the Commune in order to prepare an estimate for all the costs associated with the sewerage connection.</p>	32 days	no charge

No.	Procedure	Time to complete	Cost to complete
11	* Obtain water connection	5 days	EUR 3,000
12	* Obtain telephone connection Post and Telecommunications (Poste et télécommunications, P&T) provides a cost estimate. The connection takes place after BuildCo has received the road approval.	10 days	EUR 200

* Takes place simultaneously with another procedure.

Source: *Doing Business* database.

GETTING ELECTRICITY

Access to reliable and affordable electricity is vital for businesses. To counter weak electricity supply, many firms in developing economies have to rely on self-supply, often at a prohibitively high cost. Whether electricity is reliably available or not, the first step for a customer is always to gain access by obtaining a connection.

What do the indicators cover?

Doing Business records all procedures required for a local business to obtain a permanent electricity connection and supply for a standardized warehouse, as well as the time and cost to complete them. These procedures include applications and contracts with electricity utilities, clearances from other agencies and the external and final connection works. The ranking on the ease of getting electricity is the simple average of the percentile rankings on its component indicators: procedures, time and cost. To make the data comparable across economies, several assumptions are used.

The warehouse:

- Is located in the economy's largest business city, in an area where other warehouses are located.
- Is not in a special economic zone where the connection would be eligible for subsidization or faster service.
- Has road access. The connection works involve the crossing of a road or roads but are carried out on public land.
- Is a new construction being connected to electricity for the first time.
- Has 2 stories, both above ground, with a total surface of about 1,300.6 square meters (14,000 square feet), and is built on a plot of 929 square meters (10,000 square feet).

The electricity connection:

- Is a 3-phase, 4-wire Y, 140-kilovolt-ampere (kVA) (subscribed capacity) connection.

WHAT THE GETTING ELECTRICITY INDICATORS MEASURE

Procedures to obtain an electricity connection (number)

Submitting all relevant documents and obtaining all necessary clearances and permits

Completing all required notifications and receiving all necessary inspections

Obtaining external installation works and possibly purchasing material for these works

Concluding any necessary supply contract and obtaining final supply

Time required to complete each procedure (calendar days)

Is at least 1 calendar day

Each procedure starts on a separate day

Does not include time spent gathering information

Reflects the time spent in practice, with little follow-up and no prior contact with officials

Cost required to complete each procedure (% of income per capita)

Official costs only, no bribes

Excludes value added tax

- Is 150 meters long.
- Is to either the low-voltage or the medium-voltage distribution network and either overhead or underground, whichever is more common in the economy and in the area where the warehouse is located. The length of any connection in the customer's private domain is negligible.
- Involves installing one electricity meter. The monthly electricity consumption will be 0.07 gigawatt-hour (GWh). The internal electrical wiring has been completed.

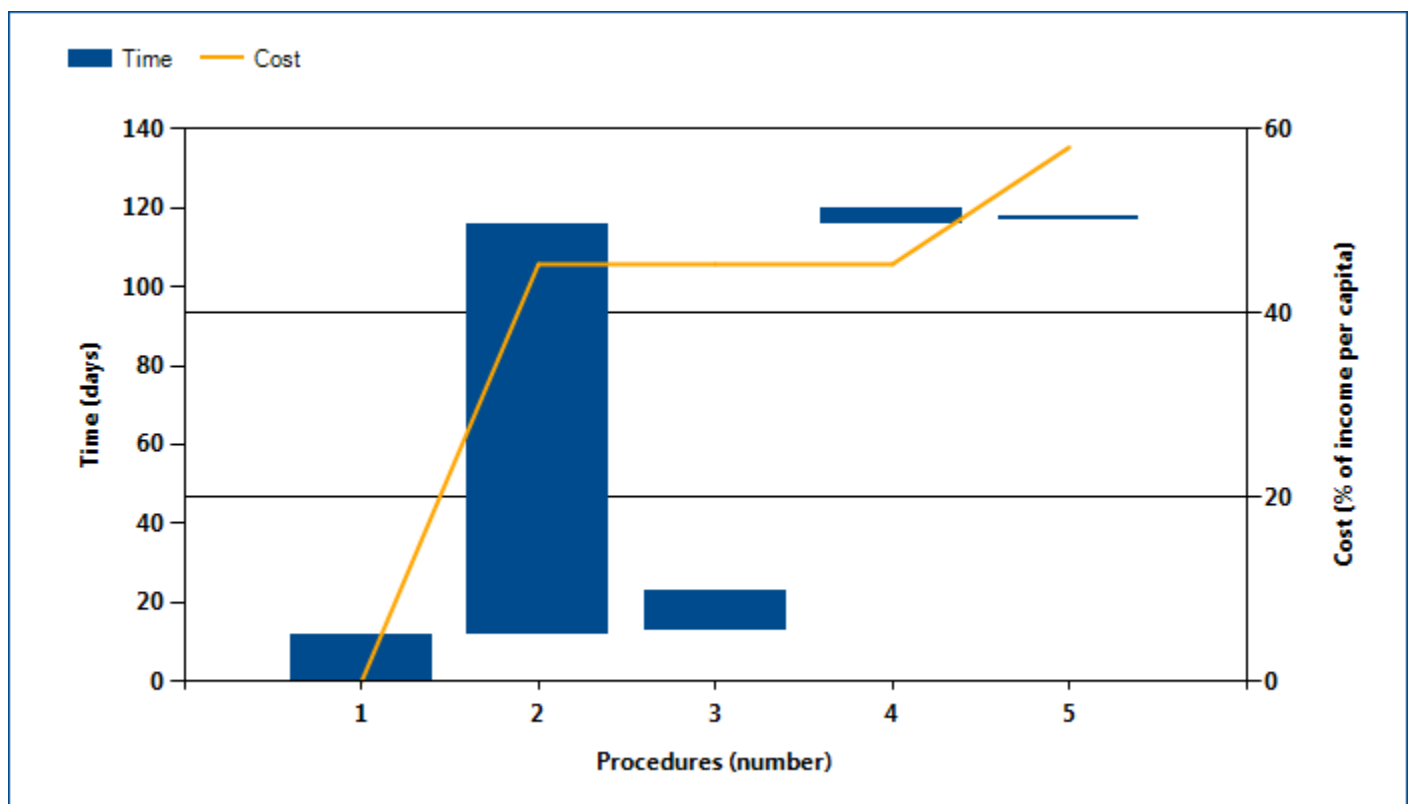
GETTING ELECTRICITY

Where does the economy stand today?

What does it take to obtain a new electricity connection in Luxembourg? According to data collected by *Doing Business*, getting electricity there

requires 5 procedures, takes 120 days and costs 58.0% of income per capita (figure 4.1).

Figure 4.1 What it takes to obtain an electricity connection in Luxembourg



Note: Time shown in the figure above may not reflect simultaneity of procedures. For more information on the methodology of the getting electricity indicators, see the *Doing Business* website (<http://www.doingbusiness.org>). For details on the procedures reflected here, see the summary at the end of this chapter.

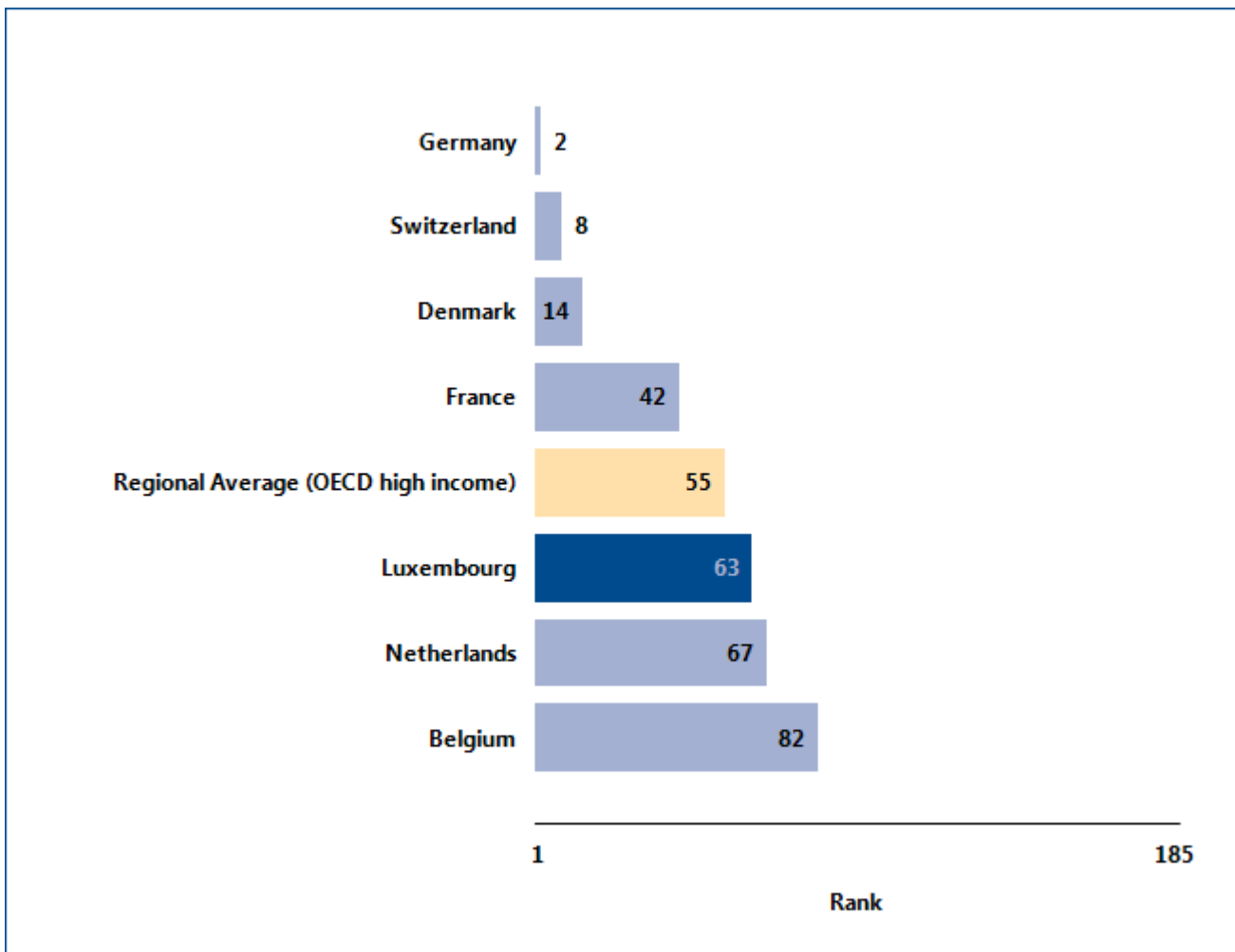
Source: *Doing Business* database.

GETTING ELECTRICITY

Globally, Luxembourg stands at 63 in the ranking of 185 economies on the ease of getting electricity (figure 4.2). The rankings for comparator economies and the regional average ranking provide another

perspective in assessing how easy it is for an entrepreneur in Luxembourg to connect a warehouse to electricity.

Figure 4.2 How Luxembourg and comparator economies rank on the ease of getting electricity



Source: Doing Business database.

GETTING ELECTRICITY

Even more helpful than rankings on the ease of getting electricity may be the indicators underlying those rankings (table 4.1). And regional and global best performers on these indicators may provide useful benchmarks.

Table 4.1 The ease of getting electricity in Luxembourg

Indicator	Luxembourg DB2013	Luxembourg DB2012	Best performer in OECD high income DB2013	Best performer globally DB2013
Rank	63	60	Iceland (1)	Iceland (1)
Procedures (number)	5	5	Germany (3)	Germany (3)*
Time (days)	120	120	Germany (17)	Germany (17)
Cost (% of income per capita)	58.0	58.8	Japan (0.0)	Japan (0.0)

Note: DB2012 rankings shown are not last year's published rankings but comparable rankings for DB2012 that capture the effects of such factors as data corrections and the addition of 2 economies (Barbados and Malta) to the sample this year.

* Two or more economies share the top ranking on this indicator. For a list of these economies, see the *Doing Business* website (<http://www.doingbusiness.org>).

Source: *Doing Business* database.

GETTING ELECTRICITY

Obtaining an electricity connection is essential to enable a business to conduct its most basic operations. In many economies the connection process is complicated by the multiple laws and regulations involved—covering service quality, general safety, technical standards, procurement practices and internal wiring installations. In an effort to ensure

safety in the connection process while keeping connection costs reasonable, governments around the world have worked to consolidate requirements for obtaining an electricity connection. What reforms in getting electricity has *Doing Business* recorded in Luxembourg (table 4.2)?

Table 4.2 How has Luxembourg made getting electricity easier—or not?

By *Doing Business* report year

DB year	Reform
DB2012	No reform as measured by Doing Business.
DB2013	No reform as measured by Doing Business.

Source: *Doing Business* database.

GETTING ELECTRICITY

What are the details?

The indicators reported here for Luxembourg are based on a set of specific procedures—the steps that an entrepreneur must complete to get a warehouse connected to electricity by the local distribution utility—identified by *Doing Business*. Data are collected from the distribution utility, then completed and verified by electricity regulatory agencies and independent professionals such as electrical engineers, electrical contractors and construction companies. The electricity distribution utility surveyed is the one serving the area (or areas) in which warehouses are located. If there is a choice of distribution utilities, the one serving the largest number of customers is selected.

OBTAINING AN ELECTRICITY CONNECTION

City: Luxembourg

Name of Utility: Creos Luxembourg S.A.

The procedures are those that apply to a warehouse and electricity connection matching the standard assumptions used by *Doing Business* in collecting the data (see the section in this chapter on what the indicators cover). The procedures, along with the associated time and cost, are summarized below.

Summary of procedures for getting electricity in Luxembourg—and the time and cost

No.	Procedure	Time to complete	Cost to complete
1	<p>The client obtains a certificate on the availability of electrical capacity from Creos Luxembourg S.A.</p> <p>In order to obtain a building permit the client needs to first obtain a certificate from Creos Luxembourg S.A. confirming the availability of the requested capacity. No inspection is required to issue the certificate.</p> <p>In 2011, CREOS merged with Ville De Luxembourg (VDL) and became the main electricity supplier in Luxembourg-city. CREOS is involved at each stage of the electricity (supply, distribution, etc). Following the merger with VDL, CREOS has been upgrading and harmonizing the current electricity network. A list of priority sites has been established. However, CREOS sits on a municipal committee that hears about all the construction work that is done in the city, and CREOS takes every single construction opportunity to upgrade its network.</p> <p>Since 2009, CREOS has been using SAP to allow a very precise tracking of each stage of the getting electricity process. In parallel, CREOS came up with the "Harris" tool which provides KPIs to track the improvements in the upgrading process.</p> <p>Starting in 2012, CREOS have been reviewing the whole process of obtaining an electricity connection in order to speed it up.</p> <p>CREOS has brought a better network infrastructure to VDL than was previously. CREOS has been upgrading the network since 2011; the upgrading process will probably take many years. A dedicated</p>	12 calendar days	no charge

No.	Procedure	Time to complete	Cost to complete
	<p>department, called "Asset Management", tracks any opportunity to upgrade the network and is permanently in touch with the municipality for that purpose.</p> <p>After the application has been submitted, a team within CREOS calculates the required power; and identifies whether a new "poste de répartition" is needed. Connection is to Medium Voltage, and faisabilité technique" is needed for CREOS to:</p> <ul style="list-style-type: none"> • Find a way to access the network (on map) • Carry out an assessment of the power of the network; availability of the network/power • "Etude technique" + drawing of the "projet de ligne" <p>-> If a 20 KV is available nearby, then the connection can take only few days</p> <p>-> If no network is available, then customers have to order a new "poste de répartition". It takes a long time to create a new "poste de répartition" from scratch.</p>		
2	<p>The client orders a private unit substation for the external works from a local store</p> <p>Normally the works consist of a private 20/0.4 kV unit substation. The electrical installation can be either in an outside construction or in a construction inside the building if access from the outside is possible. This is the most common approach.</p> <p>Usually the client orders the substation from a local store ahead of the time. The stores are familiar with the usual type of substations that can be authorized with no problem. For reasons merely technical the substation should be operational and physically present during final connection so that it can be connected to the cables.</p> <p>Moreover, many clients order their substation even before submitting an application for connection.</p> <p>In general, for a connection in excess of 100 Amperes, the connection is not made to the low-voltage network. For 200 Amperes, an assessment needs to be made, requiring some calculation. Only 2 employees at CREOS are currently in charge of such assessments. However, the assessment would be expected to be quick, especially because only one "poste de répartition" is needed.</p> <p>In Luxembourg, 4 types of voltage are available:</p> <ul style="list-style-type: none"> - 220 KV for transportation only (a 200km network in the country) - 65 KV for regional transportation - 20 KV for distribution and transportation b/w cities (60% underground; or very cheap above ground when it makes sense) - 400 V for distribution (always underground) <p>When a client needs more than 100 Amperes, the tendency is to try and connect the client directly to the 20 KV especially because the system is more reliable, and automated (automatic restart). It would make even more sense for a warehouse where refrigerated goods are stored.</p>	104 calendar days	EUR 26,875.0

No.	Procedure	Time to complete	Cost to complete
3	<p>* The client obtains an excavation permit from the local government control</p> <p>Given that external works occur in a public domain, the client needs to request an excavation permit. The application for an excavation permit can be submitted in parallel with the application for connection.</p>	10 calendar days	no charge
4	<p>An authorized electrical contractor submits an application for final connection, awaits estimate, and obtains part of the external works from Creos Luxembourg S.A.</p> <p>The following documents need to be attached to the application:</p> <ul style="list-style-type: none"> • Construction permit • 4 copies of the cadastral extracts, installation plans, ground-plan and electrical plans of the substation + worksheets for transformer and 20-kV panel <p>None of the documents needs be notarized.</p> <p>The application can be submitted to Creos Luxembourg S.A. either in person or by mail. The form can be downloaded online, but has to be submitted in hard copy. The application form has to be submitted by the client, the building's owner (if tenant), and by an authorized electrician. This condition is required for an electrician to be able to intervene on the utility's Low-Voltage (LV)/ Medium-Voltage (MV) network. Usually clients resort to local firms that possess the required authorizations and are familiar with the local regulatory environment.</p> <p>The estimate of the connection fees is paid by direct deposit to Creos Luxembourg S.A.'s bank accounts. This is the most common option. Payment in cash is also possible.</p> <p>External works</p> <p>The substation needs to be physically present in order for the technical staff to connect it to electricity. An inspection of the MV panel, the transformer, and the main LV panel is carried out by Creos Luxembourg S.A. during final connection or just before.</p> <p>Internal installation is not inspection. Usually the mere possession of an authorization is an enough guarantee that the electrician carries out the works in accordance with the regulations. The client can, of course, request an inspection of their internal wiring from an independent control body, but this is optional.</p> <p>Creos Luxembourg S.A. is in charge of all the works, except for the civil engineering part (excavation) that the client will need to carry out.</p>	4 calendar days	no charge
5	<p>* The client signs a supply contract with an electricity supplier and obtains final connection from Creos Luxembourg S.A.</p>	1 calendar day	EUR 7,525.0

No.	Procedure	Time to complete	Cost to complete
	<p>Creos Luxembourg SA installs the meter more or less in parallel with the connection works. The utility coordinates with the client in advance so that all equipment can be turned on during the inspection visit if the installation is ok. The customer may also request a preliminary inspection. The idea is to have at least one metering system operating at the time of turn-on, to avoid that any consumption goes un-metered. Circuit breakers are locked until the date of inspection.</p> <p>The team in charge of turning on the supply is different from that in charge of the actual works.</p> <p>At the time of turn-on of their substation, the customer informs Creos Luxembourg SA by a simple signature of their preferred electricity supplier.</p> <p>In case the customer does not sign anything at that point, they will be supplied by the "default provider" designated by law, but will then have to choose a provider within a certain time limit indicated in the law.</p> <p>The actual connection represents the major part of the external works: It includes, after road opening:</p> <ul style="list-style-type: none"> • Turning off of the network being worked on • Making of the junctions between the supply cable and the public network • Making of the terminals for connecting supply cable and substation board. 		

* Takes place simultaneously with another procedure.

Source: *Doing Business* database.

REGISTERING PROPERTY

Ensuring formal property rights is fundamental. Effective administration of land is part of that. If formal property transfer is too costly or complicated, formal titles might go informal again. And where property is informal or poorly administered, it has little chance of being accepted as collateral for loans—limiting access to finance.

What do the indicators cover?

Doing Business records the full sequence of procedures necessary for a business to purchase property from another business and transfer the property title to the buyer's name. The transaction is considered complete when it is opposable to third parties and when the buyer can use the property, use it as collateral for a bank loan or resell it. The ranking on the ease of registering property is the simple average of the percentile rankings on its component indicators: procedures, time and cost.

To make the data comparable across economies, several assumptions about the parties to the transaction, the property and the procedures are used.

The parties (buyer and seller):

- Are limited liability companies, 100% domestically and privately owned.
- Are located in the periurban area of the economy's largest business city.
- Have 50 employees each, all of whom are nationals.
- Perform general commercial activities.

The property (fully owned by the seller):

- Has a value of 50 times income per capita. The sale price equals the value.
- Is registered in the land registry or cadastre, or both, and is free of title disputes.
- Is located in a periurban commercial zone, and no rezoning is required.

WHAT THE REGISTERING PROPERTY INDICATORS MEASURE

Procedures to legally transfer title on immovable property (number)

Preregistration (for example, checking for liens, notarizing sales agreement, paying property transfer taxes)

Registration in the economy's largest business city

Postregistration (for example, filing title with the municipality)

Time required to complete each procedure (calendar days)

Does not include time spent gathering information

Each procedure starts on a separate day

Procedure completed once final document is received

No prior contact with officials

Cost required to complete each procedure (% of property value)

Official costs only, no bribes

No value added or capital gains taxes included

- Has no mortgages attached and has been under the same ownership for the past 10 years.
- Consists of 557.4 square meters (6,000 square feet) of land and a 10-year-old, 2-story warehouse of 929 square meters (10,000 square feet). The warehouse is in good condition and complies with all safety standards, building codes and legal requirements. The property will be transferred in its entirety.

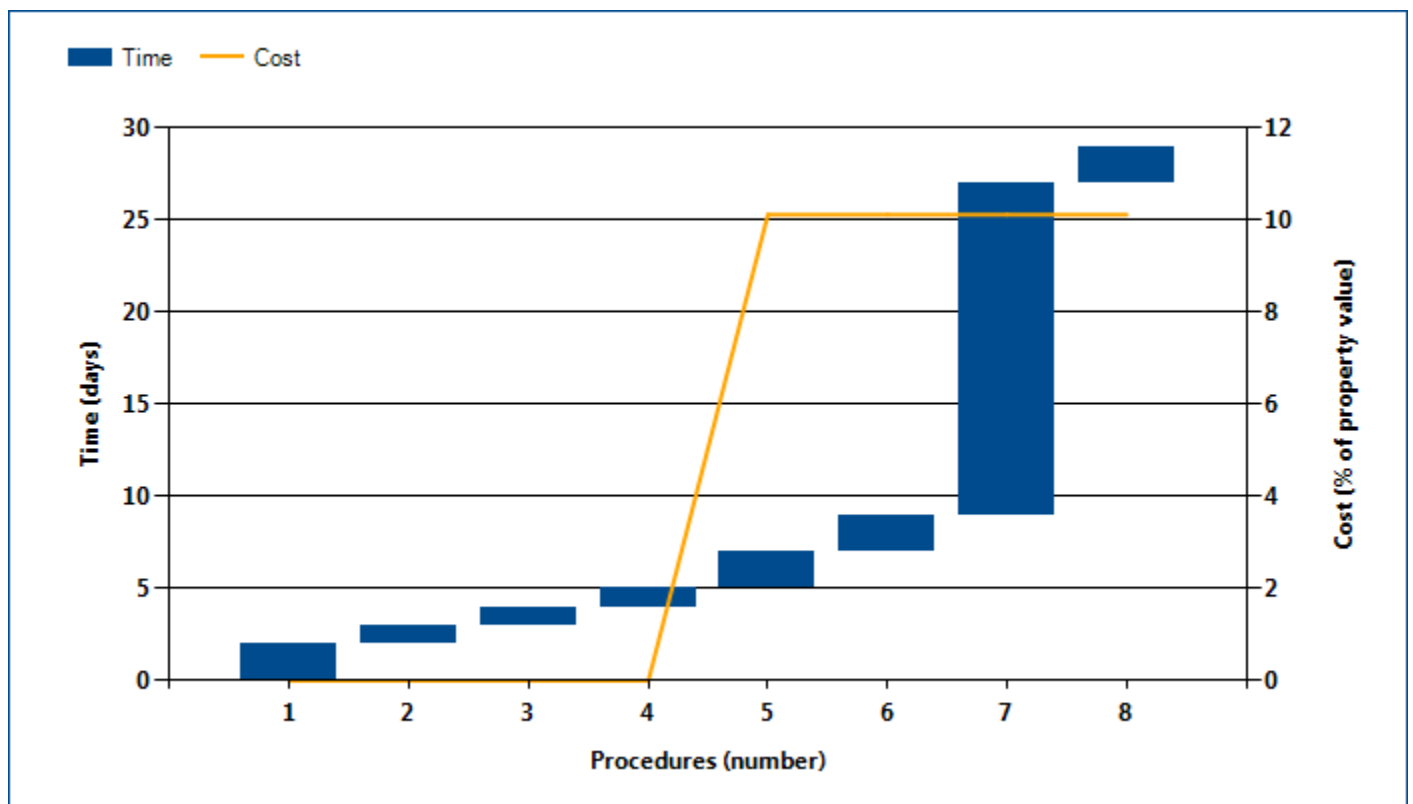
REGISTERING PROPERTY

Where does the economy stand today?

What does it take to complete a property transfer in Luxembourg? According to data collected by *Doing Business*, registering property there requires 8

procedures, takes 29 days and costs 10.1% of the property value (figure 5.1).

Figure 5.1 What it takes to register property in Luxembourg



Note: Time shown in the figure above may not reflect simultaneity of procedures. For more information on the methodology of the registering property indicators, see the *Doing Business* website (<http://www.doingbusiness.org>). For details on the procedures reflected here, see the summary at the end of this chapter.

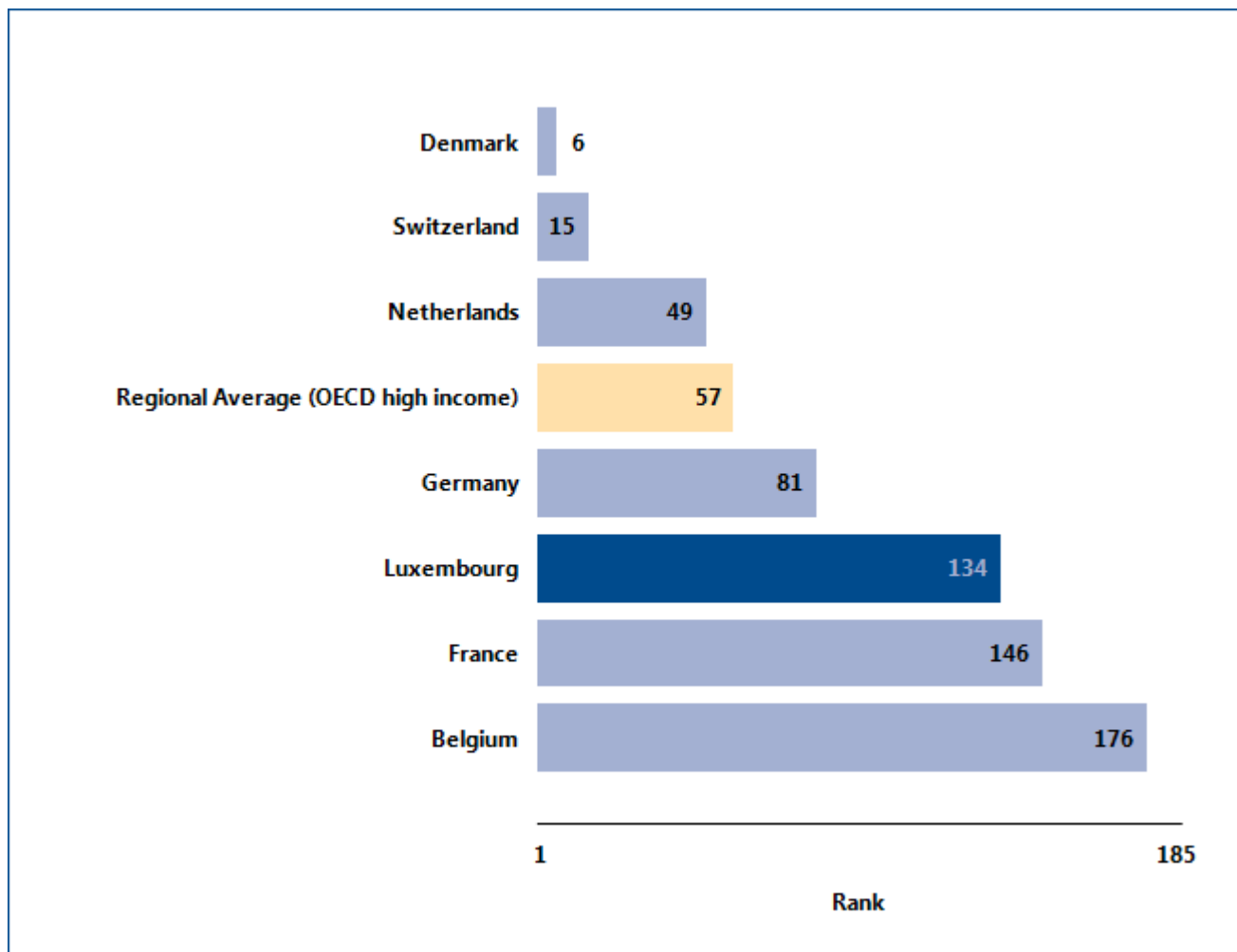
Source: *Doing Business* database.

REGISTERING PROPERTY

Globally, Luxembourg stands at 134 in the ranking of 185 economies on the ease of registering property (figure 5.2). The rankings for comparator economies

and the regional average ranking provide other useful information for assessing how easy it is for an entrepreneur in Luxembourg to transfer property.

Figure 5.2 How Luxembourg and comparator economies rank on the ease of registering property



Source: Doing Business database.

REGISTERING PROPERTY

What are the changes over time?

While the most recent *Doing Business* data reflect how easy (or difficult) it is to register property in Luxembourg today, data over time show which aspects of the process have changed—and which have not (table 5.1). That can help identify where the potential for improvement is greatest.

Table 5.1 The ease of registering property in Luxembourg over time
By *Doing Business* report year

Indicator	DB2005	DB2006	DB2007	DB2008	DB2009	DB2010	DB2011	DB2012	DB2013
Rank	..	..	..	..	..	..	..	133	134
Procedures (number)	n.a.	n.a.	8	8	8	8	8	8	8
Time (days)	n.a.	n.a.	29	29	29	29	29	29	29
Cost (% of property value)	n.a.	n.a.	10.2	10.2	10.3	10.3	10.2	10.1	10.1

Note: n.a. = not applicable (the economy was not included in *Doing Business* for that year). DB2012 rankings shown are not last year's published rankings but comparable rankings for DB2012 that capture the effects of such factors as data corrections and the addition of 2 economies (Barbados and Malta) to the sample this year. For more information on "no practice" marks, see the data notes.

Source: *Doing Business* database.

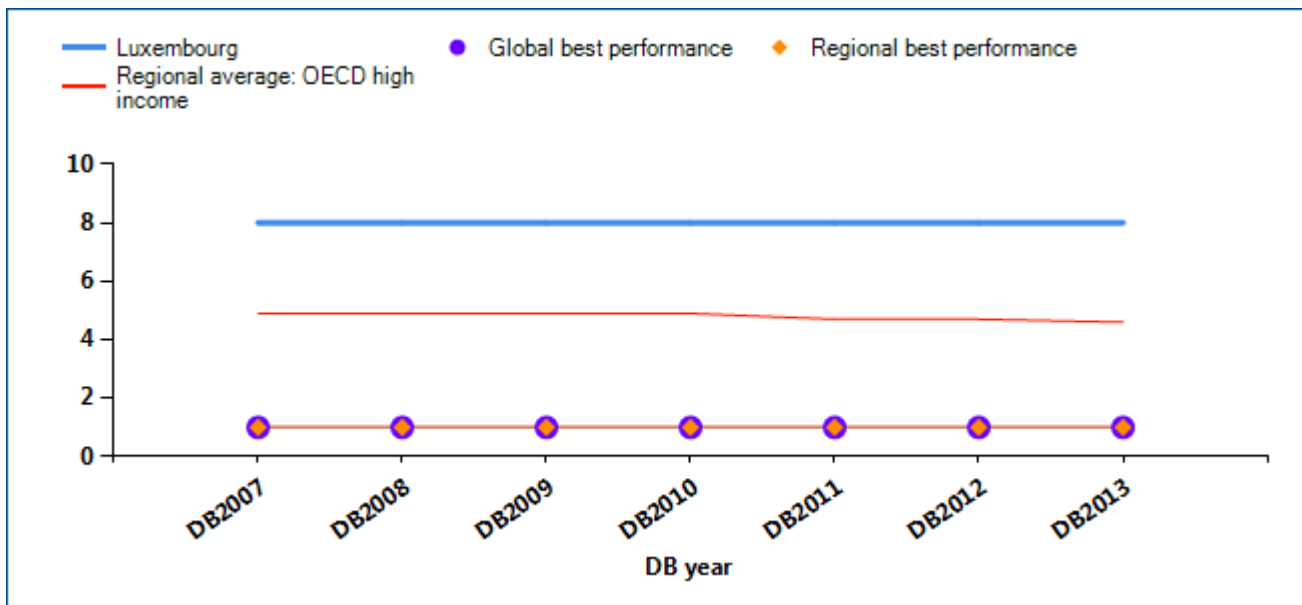
REGISTERING PROPERTY

Equally helpful may be the benchmarks provided by the economies that over time have had the best performance regionally or globally on the procedures, time or cost required to complete a property transfer (figure 5.3). These benchmarks help show what is

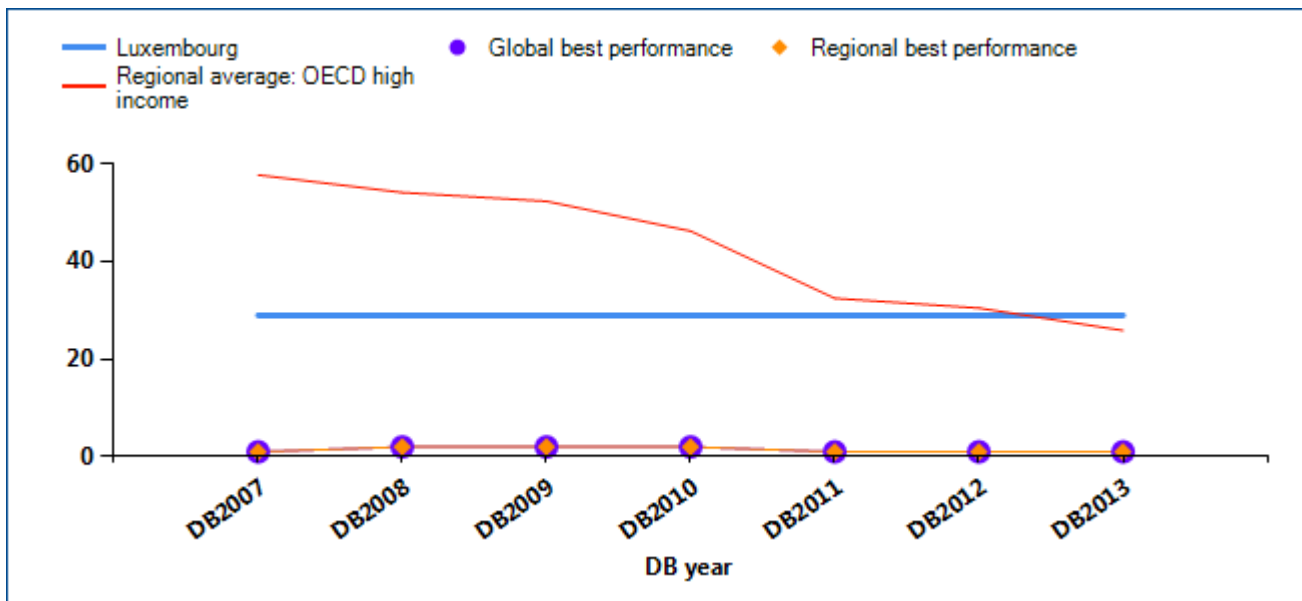
possible in making it easier to register property. And changes in regional averages can show where Luxembourg is keeping up—and where it is falling behind.

Figure 5.3 Has registering property become easier over time?

Procedures (number)

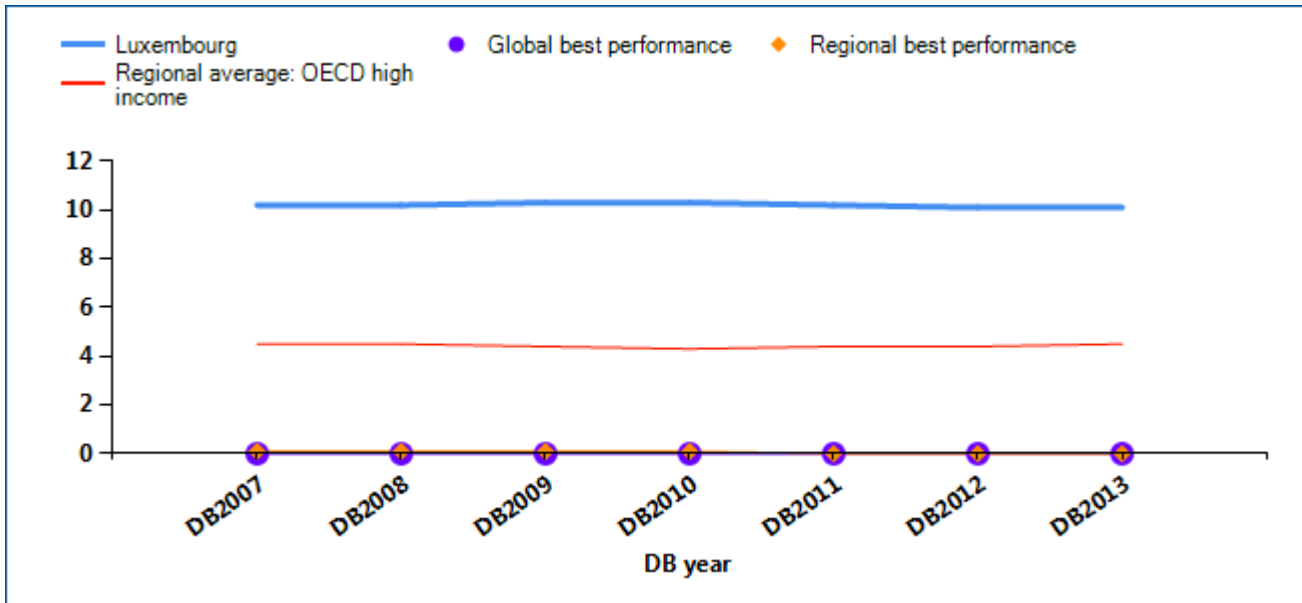


Time (days)



REGISTERING PROPERTY

Cost (% of property value)



Source: Doing Business database.

REGISTERING PROPERTY

Economies worldwide have been making it easier for entrepreneurs to register and transfer property—such as by computerizing land registries, introducing time limits for procedures and setting low fixed fees. Many

have cut the time required substantially—enabling buyers to use or mortgage their property earlier. What property registration reforms has *Doing Business* recorded in Luxembourg (table 5.2)?

Table 5.2 How has Luxembourg made registering property easier—or not?
By *Doing Business* report year

DB year	Reform
DB2008	No reform as measured by Doing Business.
DB2009	No reform as measured by Doing Business.
DB2010	No reform as measured by Doing Business.
DB2011	No reform as measured by Doing Business.
DB2012	No reform as measured by Doing Business.
DB2013	No reform as measured by Doing Business.

Note: For information on reforms in earlier years (back to DB2005), see the *Doing Business* reports for these years, available at <http://www.doingbusiness.org>.

Source: *Doing Business* database.

REGISTERING PROPERTY

What are the details?

The indicators reported here are based on a set of specific procedures—the steps that a buyer and seller must complete to transfer the property to the buyer’s name—identified by *Doing Business* through information collected from local property lawyers, notaries and property registries. These procedures are those that apply to a transaction matching the standard assumptions used by *Doing Business* in collecting the data (see the section in this chapter on what the indicators cover).

STANDARD PROPERTY TRANSFER

City: Luxembourg
Property Value: EUR 2,963,873

The procedures, along with the associated time and cost, are summarized below.

Summary of procedures for registering property in Luxembourg—and the time and cost

No.	Procedure	Time to complete	Cost to complete
1	<p>Parties visit notary to draft and authenticate the sale agreement (Compromis de Vente)</p> <p>After signing a sale agreement ("compromis de vente") between each other, as per common practice, the parties will visit a notary so he can draft and authenticate the notarial deed. The sale is complete between the parties, and ownership is acquired as of right by the buyer with respect to the seller, as soon as the property and the price have been agreed upon, although the property has not yet been delivered or the price paid (Article 1583 of the Civil Code). As a sale of real estate must be registered (which triggers the payment of registration taxes) and recorded in the mortgage registry in order to be enforceable vis-à-vis third parties and as only duly certified deeds may be entered in the register, the sale must be recorded in a notarial deed ("acte de vente"). It is sometimes preferable for each party to appoint its own notary (in which case, the notaries' fee is split between the two notaries). Here we assume the case of only one notary.</p> <p>The notary is deemed a public official with powers delegated by the state to authenticate the deeds he drafts and provides complete security to the contracts he supervises. The authenticity of the deeds grants the parties an undisputable date and content in Court. The law imposes a personal liability on the notary for his professional acts which is more extensive than that of other branches of the legal profession.</p> <p>There are 36 notaries, 13 of those in Luxembourg canton, in the Grand-Duchy of Luxembourg and the sale may be drawn up in front of anyone of them. The time period which is necessary to obtain an appointment with the notary public depends on the availability of such notary (holiday season, etc.). This study assumes that parties would call on day one and receive an appointment for the same or following day.</p>	1 - 2 days	4 EUR stamp per page of the deed (2-3 pages)

No.	Procedure	Time to complete	Cost to complete
2	<p>* Notary conducts full search at property registry</p> <p>The notary may go in person to the Bureau des Hypotheques to request and receive either a 'releve des inscriptions hypothecaires' (containing a list of mortgages), or a 'recherche par case hypothecaire' (containing a list of all land transactions effected by the landowner together with that of every mortgage or charge burdening the property). For each excerpt of the registry EUR 1.24 is payable per property owner and EUR 0.50 per each registered property. If the excerpt includes photocopies, EUR 0.50 is payable per each photocopy. For a closing certificate which confirms that the excerpts are the only existing ones EUR 1.24 per property-owner is payable. For a negative excerpt (no properties registered) EUR 2.48 is payable per person.</p>	1 day in person (simultaneous with Procedure 3)	EUR 2.48 for full search
3	<p>* Notary conducts search at the Administration du Cadastre (online)</p> <p>The notary should also check the status of the property at the cadastre. The notary can equally obtain this information through the cadaste's webpage where all this information is online.</p> <p>Free online information is available to the general public. Authorized users, such as notaries, have direct access to all information whereas the general public has only limited but adequate access to the land register information.</p>	1 day in person (simultaneous with Procedure 2)	3 EUR per page
4	<p>* Notary notifies tax administration of transfer and obtains tax clearance</p> <p>The notary visits the tax administration office to notify them that the property will be sold. The tax administration office confirms that the property has no claims or unpaid taxes on it. If there are outstanding claims or taxes, the tax administration may register a judicial mortgage on the property.</p>	1 day in person	no cost
5	<p>Buyer sends funds, fees, taxes and anti-money laundering documents to notary</p> <p>The buyer will pay the taxes, fees and funds for the property by wire transfer to the notary, in addition to notarial fees. Notarial fees are determined by the Regulation of 24 July, 1971 on the revision of notary fees. The buyer must also send anti-money laundering documentation to the notary at this time, regarding the origin of the funds he is using.</p>	2 days	6% market value of property (registration fee) + 3% market value of property (municipal surcharge within city of Luxembourg) + 1% market value of property (transcription duty)+ Notary fee schedule according to the official schedule
6	<p>Parties return to notary to sign transfer deed in original</p>	1 - 2 days	already paid in

No.	Procedure	Time to complete	Cost to complete
			Procedure 5
7	<p>Notary registers transfer deed at the Administration de l'Enregistrement et des Domaines</p> <p>The notary registers the transfer deed at the Administration de l'Enregistrement et des Domaines, which charges the transfer duty to the notary. The Administration will record the transfer, making it opposable to third parties, after two to five days. The Administration will also send the deed to the Administration du Cadastre for registration of the new owner there. It will take the Cadastre about two weeks to record the new owner. At the same time, the Administration will take about two weeks to send a copy of the registered deed, with the stamp of the Administration and a reference number on it, back to the notary. This document would be needed in practice to use the property to obtain a loan from a bank. The registration, municipal and inscription fees are paid by the parties to the notary, who pays the Administration.</p>	3 - 5 days to record + 14 days to send a copy of the registered deed	already paid in Procedure 5
8	<p>Notary registers transfer deed at the Administration de l'Enregistrement et des Domaines</p> <p>Once he receives it, the notary will send the registered deed to the parties.</p>	1 - 2 days	already paid in Procedure 5

* Takes place simultaneously with another procedure.

Source: Doing Business database.

GETTING CREDIT

Two types of frameworks can facilitate access to credit and improve its allocation: credit information systems and the legal rights of borrowers and lenders in collateral and bankruptcy laws. Credit information systems enable lenders to view a potential borrower's financial history (positive or negative)—valuable information to consider when assessing risk. And they permit borrowers to establish a good credit history that will allow easier access to credit. Sound collateral laws enable businesses to use their assets, especially movable property, as security to generate capital—while strong creditors' rights have been associated with higher ratios of private sector credit to GDP.

What do the indicators cover?

Doing Business assesses the sharing of credit information and the legal rights of borrowers and lenders with respect to secured transactions through 2 sets of indicators. The depth of credit information index measures rules and practices affecting the coverage, scope and accessibility of credit information available through a public credit registry or a private credit bureau. The strength of legal rights index measures whether certain features that facilitate lending exist within the applicable collateral and bankruptcy laws. *Doing Business* uses case scenarios to determine the scope of the secured transactions system, involving a secured borrower and a secured lender and examining legal restrictions on the use of movable collateral. These scenarios assume that the borrower:

- Is a private, limited liability company.
- Has its headquarters and only base of operations in the largest business city.

WHAT THE GETTING CREDIT INDICATORS MEASURE

Strength of legal rights index (0–10)

Protection of rights of borrowers and lenders through collateral laws

Protection of secured creditors' rights through bankruptcy laws

Depth of credit information index (0–6)

Scope and accessibility of credit information distributed by public credit registries and private credit bureaus

Public credit registry coverage (% of adults)

Number of individuals and firms listed in public credit registry as percentage of adult population

Private credit bureau coverage (% of adults)

Number of individuals and firms listed in largest private credit bureau as percentage of adult population

- Has 100 employees.
- Is 100% domestically owned, as is the lender.

The ranking on the ease of getting credit is based on the percentile rankings on the sum of its component indicators: the depth of credit information index and the strength of legal rights index.

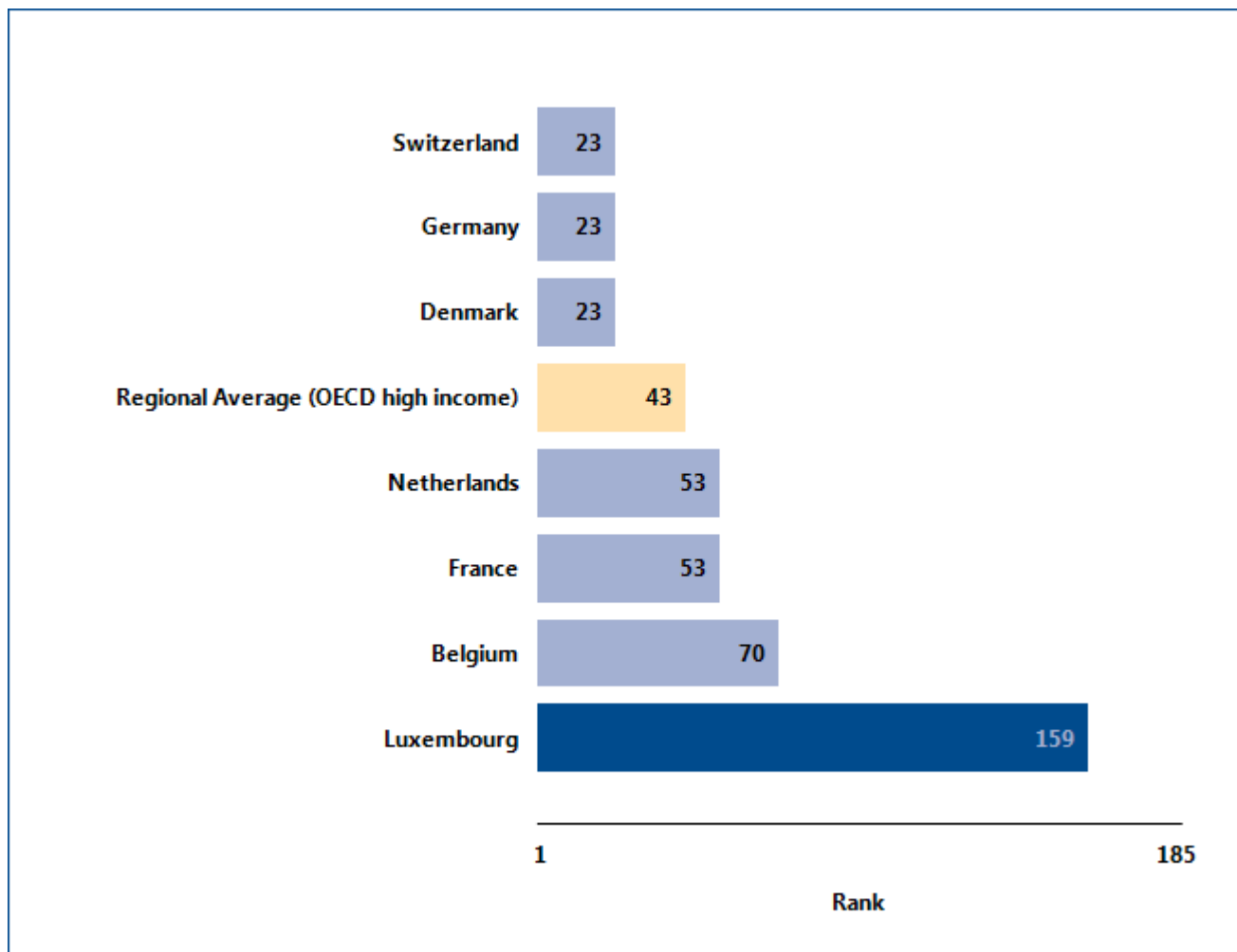
GETTING CREDIT

Where does the economy stand today?

How well do the credit information system and collateral and bankruptcy laws in Luxembourg facilitate access to credit? The economy has a score of 0 on the depth of credit information index and a score of 5 on the strength of legal rights index (see the summary of scoring at the end of this chapter for details). Higher scores indicate more credit information and stronger legal rights for borrowers and lenders.

Globally, Luxembourg stands at 159 in the ranking of 185 economies on the ease of getting credit (figure 6.1). The rankings for comparator economies and the regional average ranking provide other useful information for assessing how well regulations and institutions in Luxembourg support lending and borrowing.

Figure 6.1 How Luxembourg and comparator economies rank on the ease of getting credit



Source: Doing Business database.

GETTING CREDIT

What are the changes over time?

While the most recent *Doing Business* data reflect how well the credit information system and collateral and bankruptcy laws in Luxembourg support lending and borrowing today, data over time can help show where

institutions and regulations have been strengthened—and where they have not (table 6.1). That can help identify where the potential for improvement is greatest.

Table 6.1 The ease of getting credit in Luxembourg over time
By *Doing Business* report year

Indicator	DB2005	DB2006	DB2007	DB2008	DB2009	DB2010	DB2011	DB2012	DB2013
Rank	..	..	..	..	..	..	..	158	159
Strength of legal rights index (0-10)	n.a.	n.a.	5	5	5	5	5	5	5
Depth of credit information index (0-6)	n.a.	n.a.	0	0	0	0	0	0	0
Public registry coverage (% of adults)	n.a.	n.a.	n.a.	0.0	0.0	0.0	0.0	0.0	0.0
Private bureau coverage (% of adults)	n.a.	n.a.	n.a.	0.0	0.0	0.0	0.0	0.0	0.0

Note: n.a. = not applicable (the economy was not included in *Doing Business* for that year). DB2012 rankings shown are not last year's published rankings but comparable rankings for DB2012 that capture the effects of such factors as data corrections and the addition of 2 economies (Barbados and Malta) to the sample this year.

Source: *Doing Business* database.

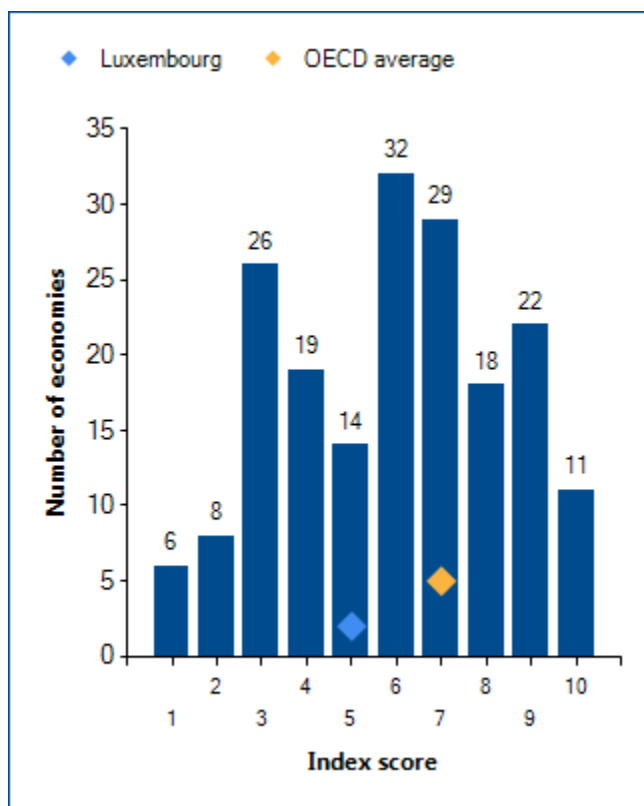
GETTING CREDIT

One way to put an economy's score on the getting credit indicators into context is to see where the economy stands in the distribution of scores across economies. Figure 6.2 highlights the score on the strength of legal rights index for Luxembourg in 2012

and shows the number of economies with this score in 2012 as well as the regional average score. Figure 6.3 shows the same thing for the depth of credit information index.

Figure 6.2 How strong are legal rights for borrowers and lenders?

Number of economies with each score on strength of legal rights index (0–10), 2012

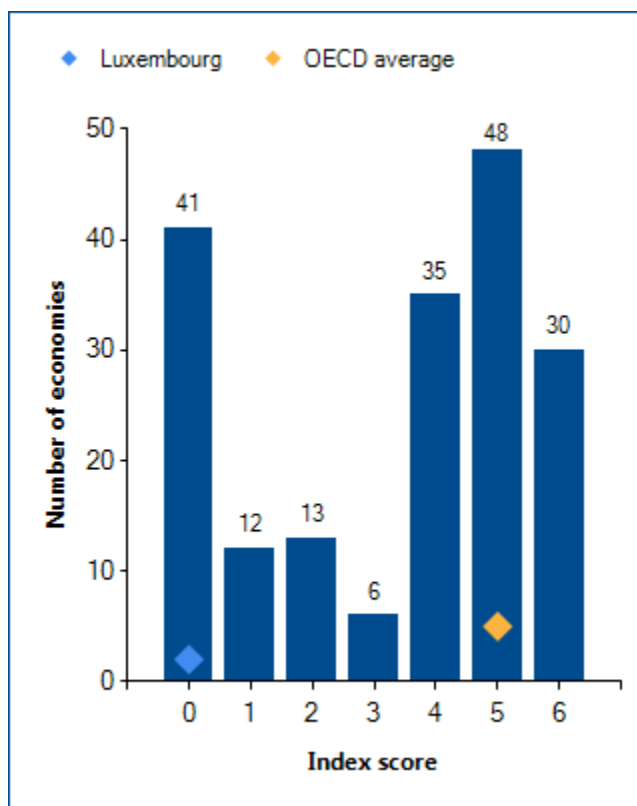


Note: Higher scores indicate that collateral and bankruptcy laws are better designed to facilitate access to credit.

Source: Doing Business database.

Figure 6.3 How much credit information is shared—and how widely?

Number of economies with each score on depth of credit information index (0–6), 2012



Note: Higher scores indicate the availability of more credit information, from either a public credit registry or a private credit bureau, to facilitate lending decisions. Regional averages for the depth of credit information index exclude economies with no public registry or private bureau.

Source: Doing Business database.

GETTING CREDIT

When economies strengthen the legal rights of lenders and borrowers under collateral and bankruptcy laws, and increase the scope, coverage and accessibility of credit information, they can increase entrepreneurs' access to credit. What credit reforms has *Doing Business* recorded in Luxembourg (table 6.2)?

Table 6.2 How has Luxembourg made getting credit easier—or not?
By *Doing Business* report year

DB year	Reform
DB2008	No reform as measured by Doing Business.
DB2009	No reform as measured by Doing Business.
DB2010	No reform as measured by Doing Business.
DB2011	No reform as measured by Doing Business.
DB2012	No reform as measured by Doing Business.
DB2013	No reform as measured by Doing Business.

Note: For information on reforms in earlier years (back to DB2005), see the *Doing Business* reports for these years, available at <http://www.doingbusiness.org>.

Source: *Doing Business* database.

GETTING CREDIT

What are the details?

The getting credit indicators reported here for Luxembourg are based on detailed information collected in that economy. The data on credit information sharing are collected through a survey of a public credit registry or private credit bureau (if one exists). To construct the depth of credit information index, a score of 1 is assigned for each of 6 features of the public credit registry or private credit bureau (see summary of scoring below).

The data on the legal rights of borrowers and lenders are gathered through a survey of financial lawyers and verified through analysis of laws and regulations as well as public sources of information on collateral and bankruptcy laws. For the strength of legal rights index, a score of 1 is assigned for each of 8 aspects related to legal rights in collateral law and 2 aspects in bankruptcy law.

Summary of scoring for the getting credit indicators in Luxembourg

Indicator	Luxembourg	OECD high income average	OECD high income average
Strength of legal rights index (0-10)	5		7
Depth of credit information index (0-6)	0		5
Public registry coverage (% of adults)	0.0		31.5
Private bureau coverage (% of adults)	0.0		74.6

Note: In cases where an economy's regional classification is "OECD high income," regional averages above are only displayed once. Regional averages for the depth of credit information index exclude economies with no public registry or private bureau. Regional averages for the public registry coverage exclude economies with no public registry. Regional averages for the private bureau coverage exclude economies with no private bureau.

Strength of legal rights index (0-10)	Index score: 5
Can any business use movable assets as collateral while keeping possession of the assets; and any financial institution accept such assets as collateral ?	Yes
Does the law allow businesses to grant a non possessory security right in a single category of movable assets, without requiring a specific description of collateral?	No
Does the law allow businesses to grant a non possessory security right in substantially all of its assets, without requiring a specific description of collateral?	Yes
May a security right extend to future or after-acquired assets, and may it extend automatically to the products, proceeds or replacements of the original assets ?	No
Is a general description of debts and obligations permitted in collateral agreements; can all types of debts and obligations be secured between parties; and can the collateral agreement include a maximum amount for which the assets are encumbered?	Yes
Is a collateral registry in operation, that is unified geographically and by asset type, with an electronic database indexed by debtor's names?	No

Strength of legal rights index (0–10)	Index score: 5
Are secured creditors paid first (i.e. before general tax claims and employee claims) when a debtor defaults outside an insolvency procedure?	Yes
Are secured creditors paid first (i.e. before general tax claims and employee claims) when a business is liquidated?	Yes
Are secured creditors either not subject to an automatic stay or moratorium on enforcement procedures when a debtor enters a court-supervised reorganization procedure, or the law provides secured creditors with grounds for relief from an automatic stay or	No
Does the law allow parties to agree in a collateral agreement that the lender may enforce its security right out of court, at the time a security interest is created?	No

Depth of credit information index (0–6)	Private credit bureau	Public credit registry	Index score: 0
Are data on both firms and individuals distributed?	No	No	0
Are both positive and negative data distributed?	No	No	0
Does the registry distribute credit information from retailers, trade creditors or utility companies as well as financial institutions?	No	No	0
Are more than 2 years of historical credit information distributed?	No	No	0
Is data on all loans below 1% of income per capita distributed?	No	No	0
Is it guaranteed by law that borrowers can inspect their data in the largest credit registry?	No	No	0

Note: An economy receives a score of 1 if there is a "yes" to either private bureau or public registry.

Coverage	Private credit bureau	Public credit registry
Number of firms	0	0
Number of individuals	0	0

Source: Doing Business database.

PROTECTING INVESTORS

Investor protections matter for the ability of companies to raise the capital they need to grow, innovate, diversify and compete. If the laws do not provide such protections, investors may be reluctant to invest unless they become the controlling shareholders. Strong regulations clearly define related-party transactions, promote clear and efficient disclosure requirements, require shareholder participation in major decisions of the company and set clear standards of accountability for company insiders.

What do the indicators cover?

Doing Business measures the strength of minority shareholder protections against directors' use of corporate assets for personal gain—or self-dealing. The indicators distinguish 3 dimensions of investor protections: transparency of related-party transactions (extent of disclosure index), liability for self-dealing (extent of director liability index) and shareholders' ability to sue officers and directors for misconduct (ease of shareholder suits index). The ranking on the strength of investor protection index is the simple average of the percentile rankings on these 3 indices. To make the data comparable across economies, a case study uses several assumptions about the business and the transaction.

The business (Buyer):

- Is a publicly traded corporation listed on the economy's most important stock exchange (or at least a large private company with multiple shareholders).
- Has a board of directors and a chief executive officer (CEO) who may legally act on behalf of Buyer where permitted, even if this is not specifically required by law.

The transaction involves the following details:

- Mr. James, a director and the majority shareholder of the company, proposes that

WHAT THE PROTECTING INVESTORS

INDICATORS MEASURE

Extent of disclosure index (0–10)

- Who can approve related-party transactions
- Disclosure requirements in case of related-party transactions

Extent of director liability index (0–10)

- Ability of shareholders to hold interested parties and members of the approving body liable in case of related-party transactions
- Available legal remedies (damages, repayment of profits, fines, imprisonment and rescission of the transaction)
- Ability of shareholders to sue directly or derivatively

Ease of shareholder suits index (0–10)

- Access to internal corporate documents (directly or through a government inspector)
- Documents and information available during trial

Strength of investor protection index (0–10)

- Simple average of the extent of disclosure, extent of director liability and ease of shareholder suits indices

the company purchase used trucks from another company he owns.

- The price is higher than the going price for used trucks, but the transaction goes forward.
- All required approvals are obtained, and all required disclosures made, though the transaction is prejudicial to Buyer.
- Shareholders sue the interested parties and the members of the board of directors.

PROTECTING INVESTORS

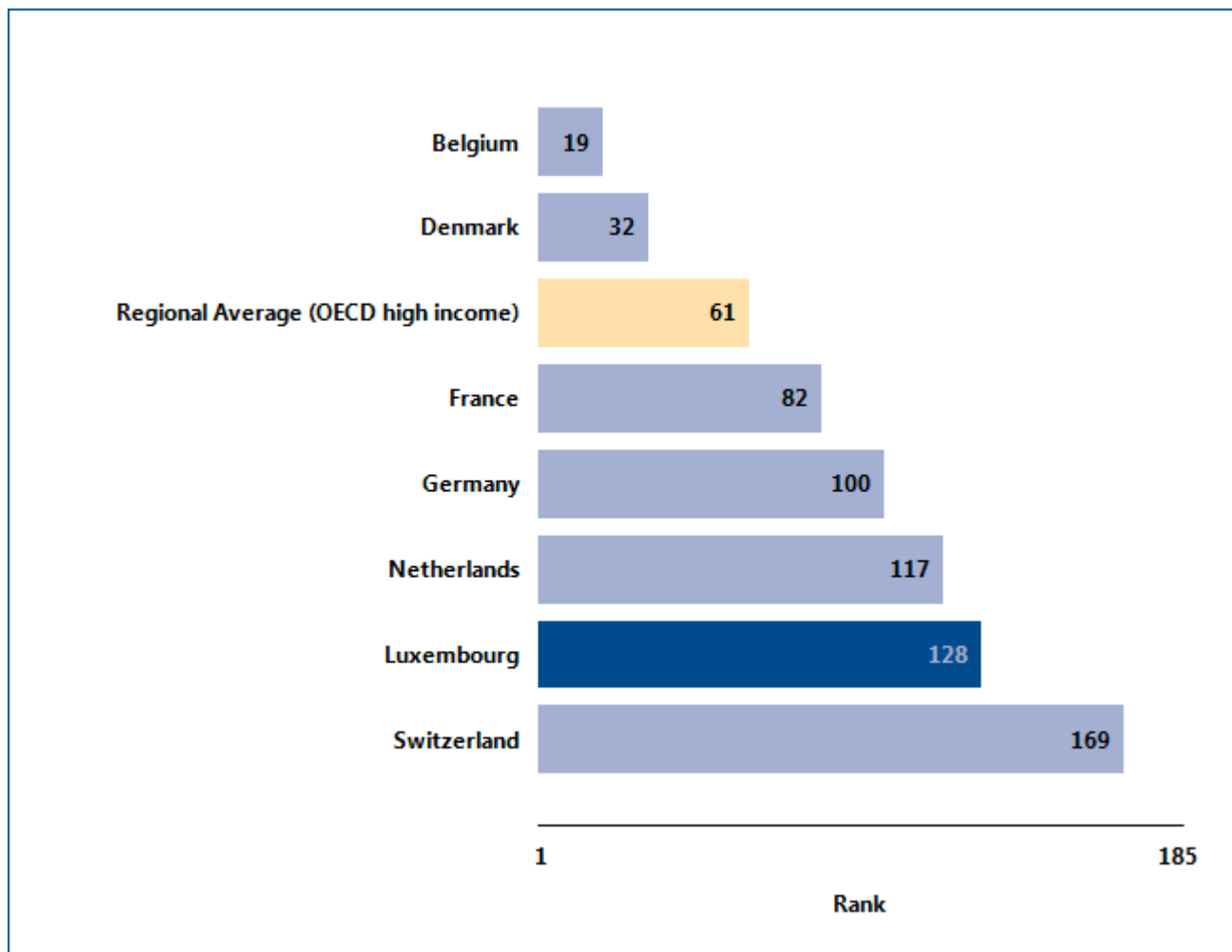
Where does the economy stand today?

How strong are investor protections in Luxembourg? The economy has a score of 4.3 on the strength of investor protection index, with a higher score indicating stronger protections (see the summary of scoring at the end of this chapter for details).

Globally, Luxembourg stands at 128 in the ranking of 185 economies on the strength of investor protection

index (figure 7.1). While the indicator does not measure all aspects related to the protection of minority investors, a higher ranking does indicate that an economy's regulations offer stronger investor protections against self-dealing in the areas measured.

Figure 7.1 How Luxembourg and comparator economies rank on the strength of investor protection index



Source: Doing Business database.

PROTECTING INVESTORS

What are the changes over time?

While the most recent *Doing Business* data reflect how well regulations in Luxembourg protect minority investors today, data over time show whether the protections have been strengthened (table 7.1). And

the global ranking on the strength of investor protection index over time shows whether the economy is slipping behind other economies in investor protections—or surpassing them.

Table 7.1 The strength of investor protections in Luxembourg over time
By *Doing Business* report year

Indicator	DB2006	DB2007	DB2008	DB2009	DB2010	DB2011	DB2012	DB2013
Rank	..	..	..	..	..	..	124	128
Extent of disclosure index (0-10)	n.a.	6	6	6	6	6	6	6
Extent of director liability index (0-10)	n.a.	4	4	4	4	4	4	4
Ease of shareholder suits index (0-10)	n.a.	3	3	3	3	3	3	3
Strength of investor protection index (0-10)	n.a.	4.3	4.3	4.3	4.3	4.3	4.3	4.3

Note: n.a. = not applicable (the economy was not included in *Doing Business* for that year). DB2012 rankings shown are not last year's published rankings but comparable rankings for DB2012 that capture the effects of such factors as data corrections and the addition of 2 economies (Barbados and Malta) to the sample this year.

Source: *Doing Business* database.

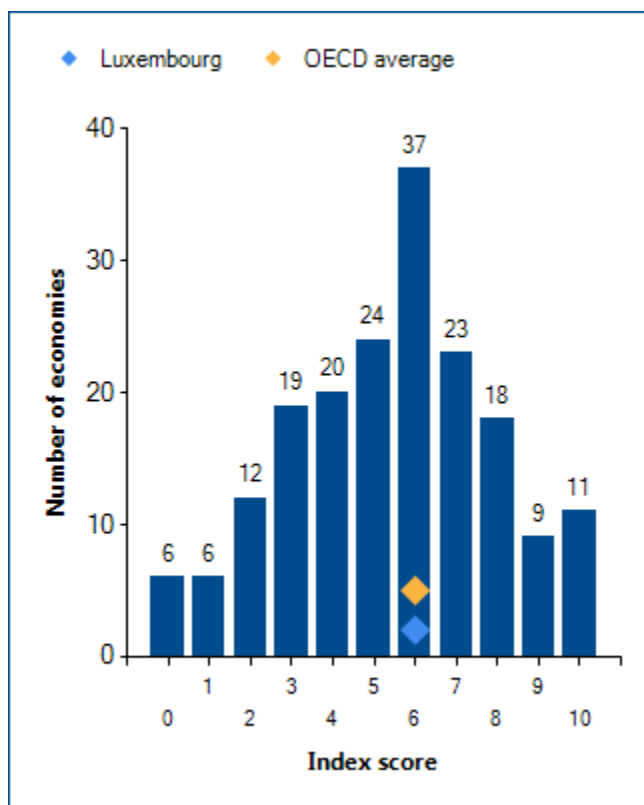
PROTECTING INVESTORS

One way to put an economy's scores on the protecting investors indicators into context is to see where the economy stands in the distribution of scores across economies. Figure 7.2 highlights the score on the extent of disclosure index for Luxembourg in 2012 and

shows the number of economies with this score in 2012 as well as the regional average score. Figure 7.3 shows the same thing for the extent of director liability index, and figure 7.4 for the ease of shareholder suits index.

Figure 7.2 How strong are disclosure requirements?

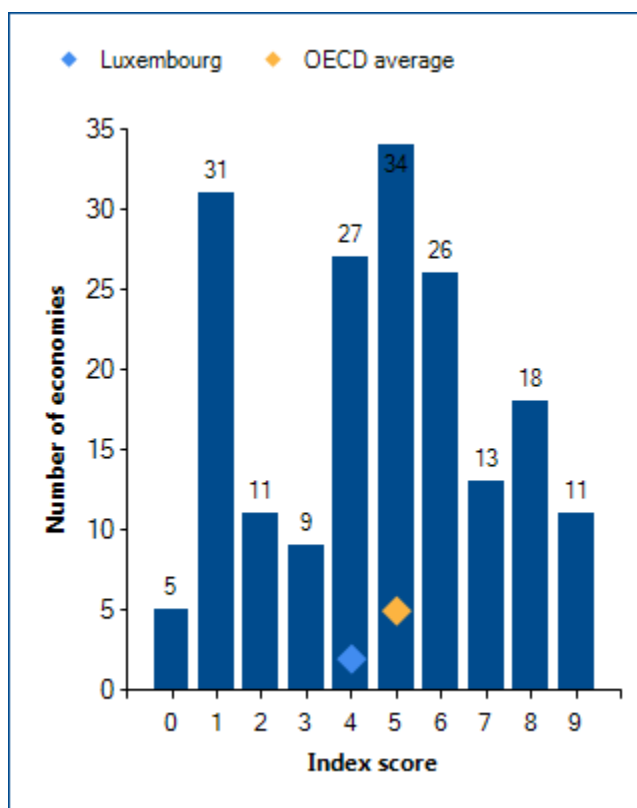
Number of economies with each score on extent of disclosure index (0–10), 2012



Note: Higher scores indicate greater disclosure.
Source: Doing Business database.

Figure 7.3 How strong is the liability regime for directors?

Number of economies with each score on extent of director liability index (0–10), 2012

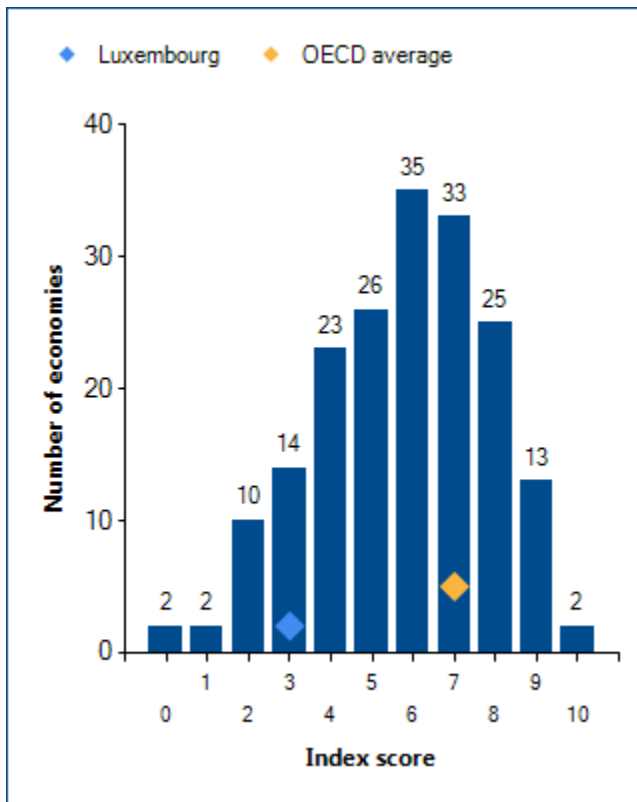


Note: Higher scores indicate greater liability of directors. No economy receives a score of 10 on the extent of director liability index.
Source: Doing Business database.

PROTECTING INVESTORS

Figure 7.4 How easy is access to internal corporate documents?

Number of economies with each score on ease of shareholder suits index (0–10), 2012



Note: Higher scores indicate greater powers of shareholders to challenge the transaction.

Source: *Doing Business* database.

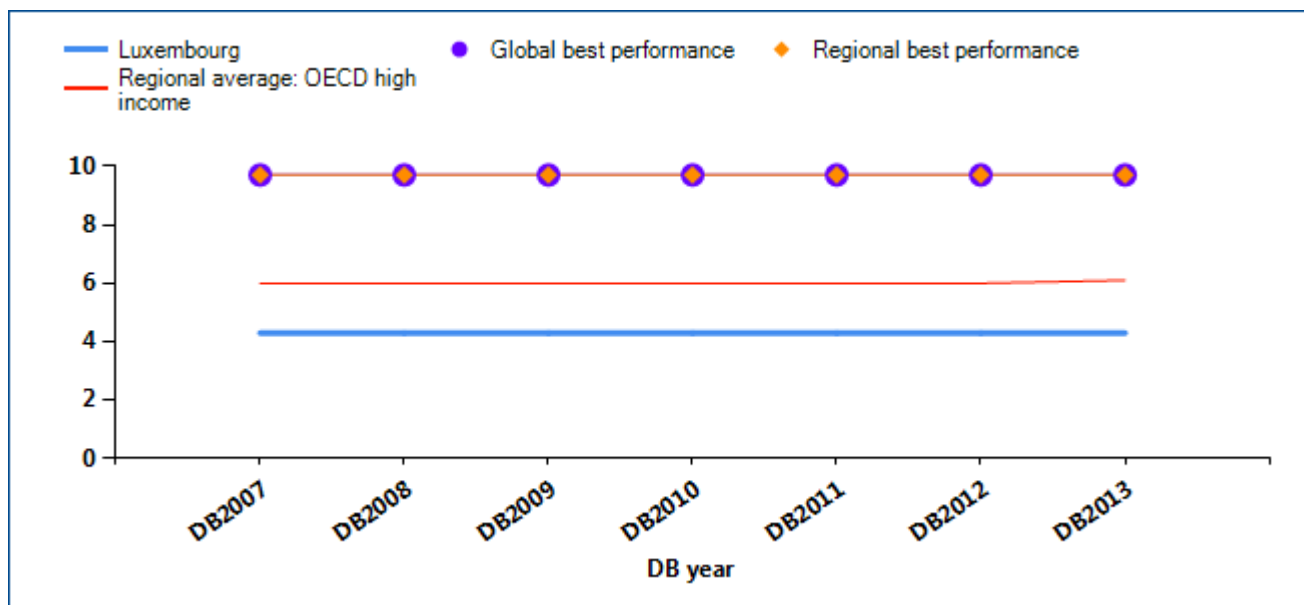
PROTECTING INVESTORS

The scores recorded over time for Luxembourg on the strength of investor protection index may also be revealing (figure 7.5). Equally interesting may be the

changes over time in the regional average score on this index.

Figure 7.5 Have investor protections become stronger over time?

Strength of investor protection index (0–10)



Note: The higher the score, the stronger the investor protections.

Source: Doing Business database.

PROTECTING INVESTORS

Economies with the strongest protections of minority investors from self-dealing require more disclosure and define clear duties for directors. They also have well-functioning courts and up-to-date procedural rules that give minority investors the means to prove their case and obtain a judgment within a reasonable

time. So reforms to strengthen investor protections may move ahead on different fronts—such as through new or amended company laws or civil procedure rules. What investor protection reforms has *Doing Business* recorded in Luxembourg (table 7.2)?

Table 7.2 How has Luxembourg strengthened investor protections—or not?
By *Doing Business* report year

DB year	Reform
DB2008	No reform as measured by Doing Business.
DB2009	No reform as measured by Doing Business.
DB2010	No reform as measured by Doing Business.
DB2011	No reform as measured by Doing Business.
DB2012	No reform as measured by Doing Business.
DB2013	No reform as measured by Doing Business.

Note: For information on reforms in earlier years (back to DB2006), see the *Doing Business* reports for these years, available at <http://www.doingbusiness.org>.

Source: *Doing Business* database.

PROTECTING INVESTORS

What are the details?

The protecting investors indicators reported here for Luxembourg are based on detailed information collected through a survey of corporate and securities lawyers as well as on securities regulations, company laws and court rules of evidence. To construct the extent of disclosure, extent of director liability and

ease of shareholder suits indices, a score is assigned for each of a range of conditions relating to disclosure, director liability and shareholder suits in a standard case study transaction (see the notes at the end of this chapter). The summary below shows the details underlying the scores for Luxembourg.

Summary of scoring for the protecting investors indicators in Luxembourg

Indicator	Luxembourg	OECD high income average	OECD high income average
Extent of disclosure index (0-10)	6		6
Extent of director liability index (0-10)	4		5
Ease of shareholder suits index (0-10)	3		7
Strength of investor protection index (0-10)	4.3		6.1

Note: In cases where an economy's regional classification is "OECD high income," regional averages above are only displayed once.

	Score	Score description
Extent of disclosure index (0-10)	6	
What corporate body provides legally sufficient approval for the transaction?	2	Board of directors and Mr. James is not allowed to vote
Whether disclosure of the conflict of interest by Mr. James to the board of directors is required?	1	Existence of a conflict without any specifics
Whether immediate disclosure of the transaction to the public and/or shareholders is required?	2	Disclosure on the transaction and Mr. James' conflict of interest
Whether disclosure of the transaction in published periodic filings (annual reports) is required?	1	Disclosure on the transaction only
Whether an external body must review the terms of the transaction before it takes place?	0	No
Extent of director liability index (0-10)	4	
Whether shareholders can sue directly or derivatively for the damage that the Buyer-Seller transaction causes to the company?	0	No

	Score	Score description
Whether shareholders can hold Mr. James liable for the damage that the Buyer-Seller transaction causes to the company?	1	Liable for negligence or influencing the approval of the transaction
Whether shareholders can hold members of the approving body liable for the damage that the Buyer-Seller transaction causes to the company?	1	Liable for negligence
Whether a court can void the transaction upon a successful claim by a shareholder plaintiff?	0	Not possible or only in case of Seller's fraud or bad faith
Whether Mr. James pays damages for the harm caused to the company upon a successful claim by the shareholder plaintiff?	1	Yes
Whether Mr. James repays profits made from the transaction upon a successful claim by the shareholder plaintiff?	0	No
Whether fines and imprisonment can be applied against Mr. James?	1	Yes
Ease of shareholder suits index (0-10)	3	
Whether shareholders owning 10% or less of Buyer's shares can inspect transaction documents before filing suit?	0	No
Whether shareholders owning 10% or less of Buyer's shares can request an inspector to investigate the transaction?	0	No
Whether the plaintiff can obtain any documents from the defendant and witnesses during trial?	3	Any information that is relevant to the subject matter of the claim
Whether the plaintiff can request categories of documents from the defendant without identifying specific ones?	0	No
Whether the plaintiff can directly question the defendant and witnesses during trial?	0	No
Whether the level of proof required for civil suits is lower than that of criminal cases?	0	No
Strength of investor protection index (0-10)	4.3	

Source: *Doing Business* database.

PAYING TAXES

Taxes are essential. They fund the public amenities, infrastructure and services that are crucial for a properly functioning economy. But the level of tax rates needs to be carefully chosen—and needless complexity in tax rules avoided. According to *Doing Business* data, in economies where it is more difficult and costly to pay taxes, larger shares of economic activity end up in the informal sector—where businesses pay no taxes at all.

What do the indicators cover?

Using a case scenario, *Doing Business* measures the taxes and mandatory contributions that a medium-size company must pay in a given year as well as the administrative burden of paying taxes and contributions. This case scenario uses a set of financial statements and assumptions about transactions made over the year. Information is also compiled on the frequency of filing and payments as well as time taken to comply with tax laws. The ranking on the ease of paying taxes is the simple average of the percentile rankings on its component indicators: number of annual payments, time and total tax rate, with a threshold being applied to the total tax rate.¹ To make the data comparable across economies, several assumptions about the business and the taxes and contributions are used.

- TaxpayerCo is a medium-size business that started operations on January 1, 2010.
- The business starts from the same financial position in each economy. All the taxes and mandatory contributions paid during the second year of operation are recorded.
- Taxes and mandatory contributions are measured at all levels of government.

WHAT THE PAYING TAXES INDICATORS MEASURE

Tax payments for a manufacturing company in 2011 (number per year adjusted for electronic or joint filing and payment)

Total number of taxes and contributions paid, including consumption taxes (value added tax, sales tax or goods and service tax)

Method and frequency of filing and payment

Time required to comply with 3 major taxes (hours per year)

Collecting information and computing the tax payable

Completing tax return forms, filing with proper agencies

Arranging payment or withholding

Preparing separate tax accounting books, if required

Total tax rate (% of profit before all taxes)

Profit or corporate income tax

Social contributions and labor taxes paid by the employer

Property and property transfer taxes

Dividend, capital gains and financial transactions taxes

Waste collection, vehicle, road and other taxes

- Taxes and mandatory contributions include corporate income tax, turnover tax and all labor taxes and contributions paid by the company.
- A range of standard deductions and exemptions are also recorded.

¹ The threshold is defined as the highest total tax rate among the top 15% of economies in the ranking on the total tax rate. It is calculated and adjusted on a yearly basis. The threshold is not based on any economic theory of an "optimal tax rate" that minimizes distortions or maximizes efficiency in the tax system of an economy overall. Instead, it is mainly empirical in nature, set at the lower end of the distribution of tax rates levied on medium-size enterprises in the manufacturing sector as observed through the paying taxes indicators. This reduces the bias in the indicators toward economies that do not need to levy significant taxes on companies like the *Doing Business* standardized case study company because they raise public revenue in other ways—for example, through taxes on foreign companies, through taxes on sectors other than manufacturing or from natural resources (all of which are outside the scope of the methodology). This year's threshold is 25.7%.

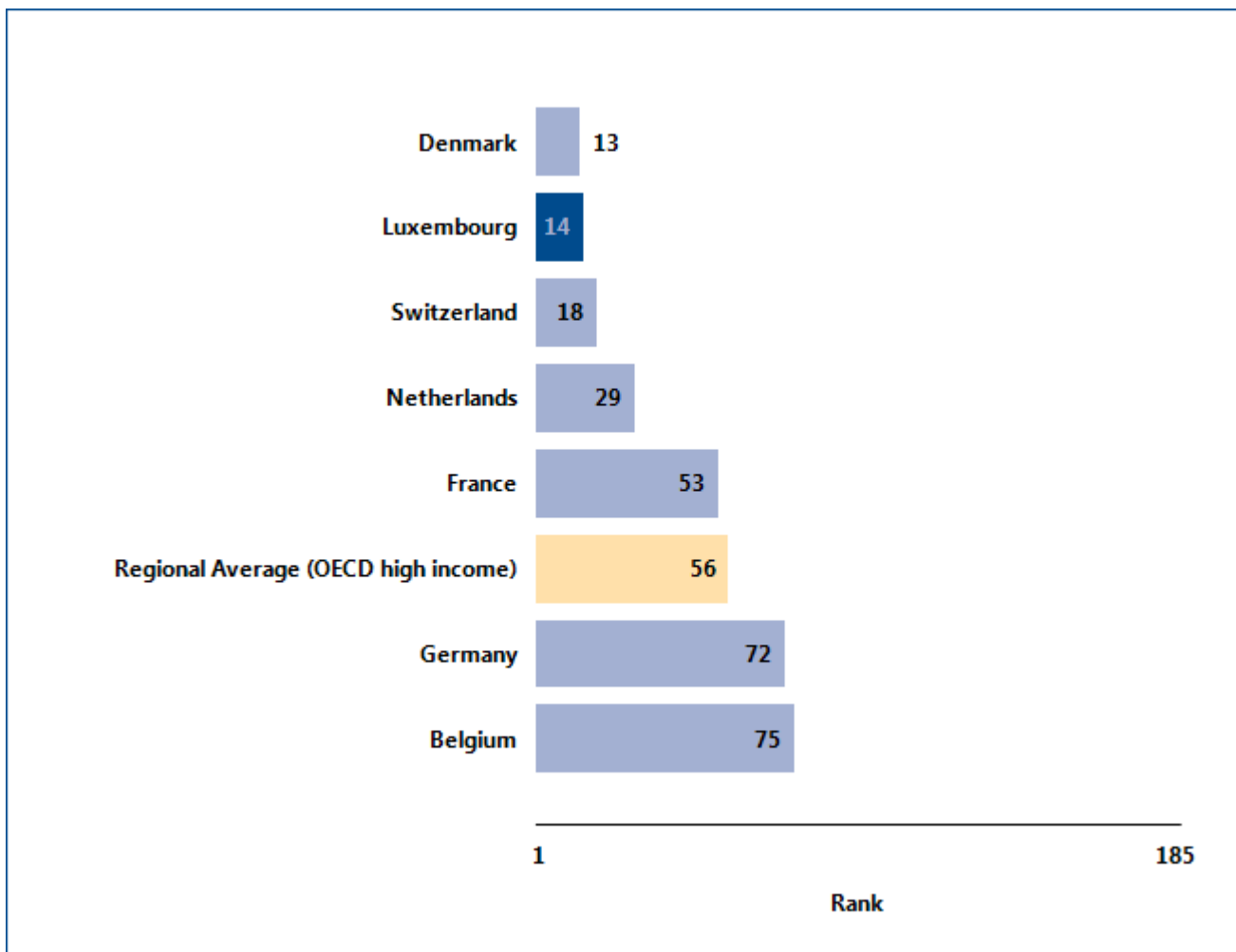
PAYING TAXES

Where does the economy stand today?

What is the administrative burden of complying with taxes in Luxembourg—and how much do firms pay in taxes? On average, firms make 23 tax payments a year, spend 59 hours a year filing, preparing and paying taxes and pay total taxes amounting to 21.0% of profit (see the summary at the end of this chapter for details).

Globally, Luxembourg stands at 14 in the ranking of 185 economies on the ease of paying taxes (figure 8.1). The rankings for comparator economies and the regional average ranking provide other useful information for assessing the tax compliance burden for businesses in Luxembourg.

Figure 8.1 How Luxembourg and comparator economies rank on the ease of paying taxes



Note: DB2013 rankings reflect changes to the methodology. For all economies with a total tax rate below the threshold of 25.7% applied in DB2013, the total tax rate is set at 25.7% for the purpose of calculating the ranking on the ease of paying taxes.

Source: *Doing Business* database.

PAYING TAXES

What are the changes over time?

While the most recent *Doing Business* data reflect how easy (or difficult) it is to comply with tax rules in Luxembourg today, data over time show which aspects of the process have changed — and which have not (table 8.1). That can help identify where the potential for easing tax compliance is greatest.

Table 8.1 The ease of paying taxes in Luxembourg over time
By *Doing Business* report year

Indicator	DB2006	DB2007	DB2008	DB2009	DB2010	DB2011	DB2012	DB2013
Rank	..	..	..	..	..	..	15	14
Payments (number per year)	n.a.	23	23	23	23	23	23	23
Time (hours per year)	n.a.	59	59	59	59	59	59	59
Total tax rate (% profit)	n.a.	21.6	21.1	20.9	20.8	20.9	20.8	21.0

Note: n.a. = not applicable (the economy was not included in *Doing Business* for that year). DB2012 rankings shown are not last year's published rankings but comparable rankings for DB2012 that capture the effects of such factors as data corrections and the addition of 2 economies (Barbados and Malta) to the sample this year. DB2013 rankings reflect changes to the methodology. For all economies with a total tax rate below the threshold of 25.7% applied in DB2013, the total tax rate is set at 25.7% for the purpose of calculating the ranking on the ease of paying taxes.

Source: *Doing Business* database.

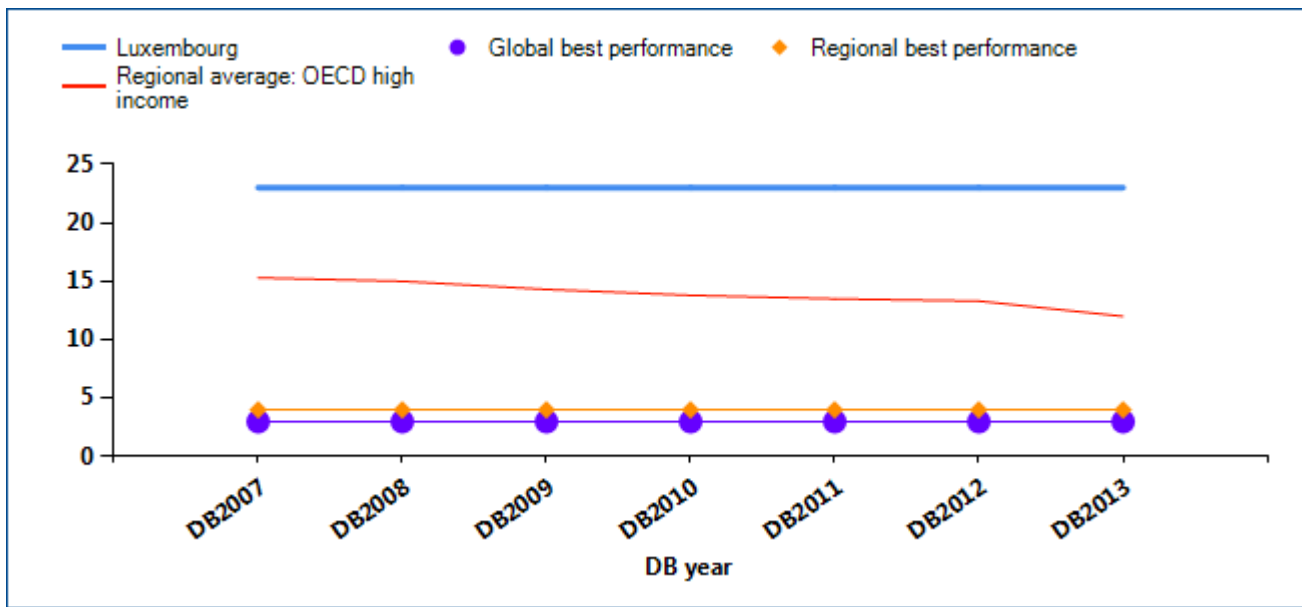
PAYING TAXES

Equally helpful may be the benchmarks provided by the economies that over time have had the best performance regionally or globally on the number of payments or the time required to prepare and file taxes (figure 8.2). These benchmarks help show what is

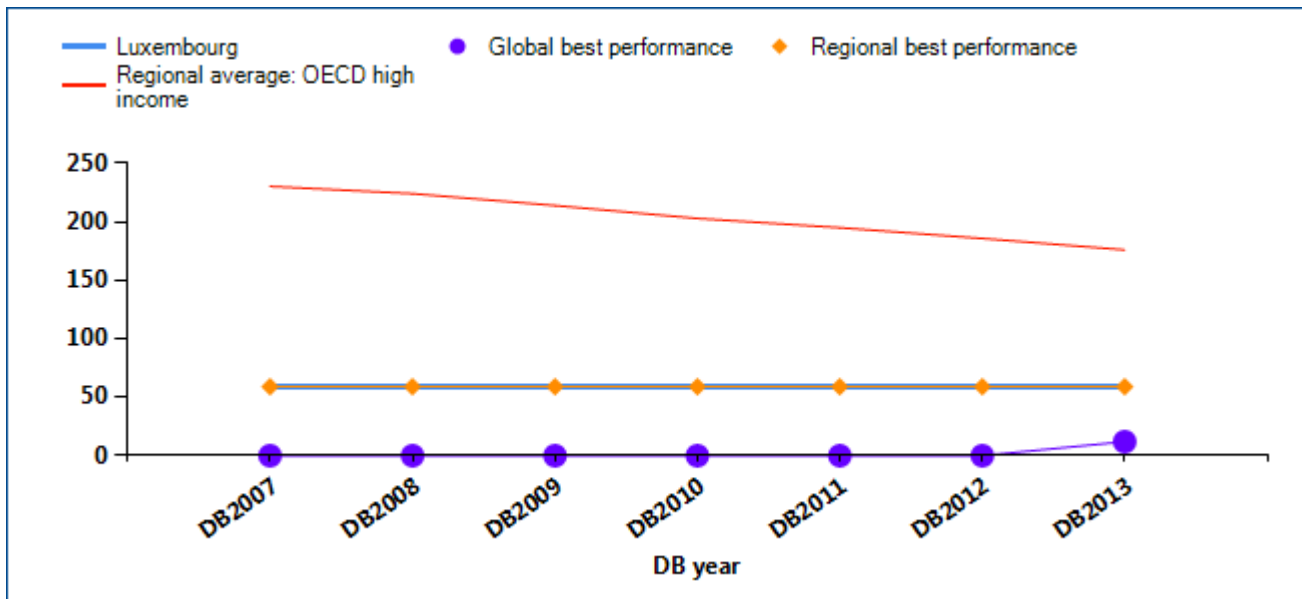
possible in easing the administrative burden of tax compliance. And changes in regional averages can show where Luxembourg is keeping up—and where it is falling behind.

Figure 8.2 Has paying taxes become easier over time?

Payments (number per year)

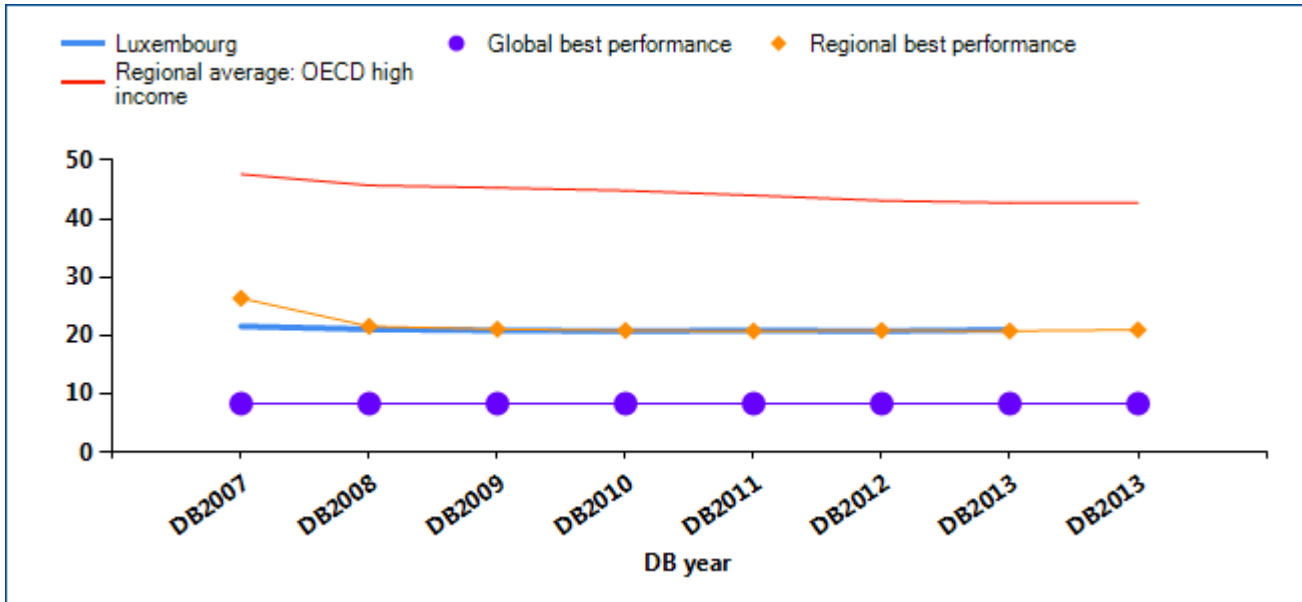


Time (hours per year)



PAYING TAXES

Total tax rate (% of profit)



Source: Doing Business database.

PAYING TAXES

Economies around the world have made paying taxes faster and easier for businesses—such as by consolidating filings, reducing the frequency of payments or offering electronic filing and payment. Many have lowered tax rates. Changes have brought

concrete results. Some economies simplifying tax payment and reducing rates have seen tax revenue rise. What tax reforms has *Doing Business* recorded in Luxembourg (table 8.2)?

Table 8.2 How has Luxembourg made paying taxes easier—or not?
By *Doing Business* report year

DB year	Reform
DB2008	No reform as measured by Doing Business.
DB2009	No reform as measured by Doing Business.
DB2010	No reform as measured by Doing Business.
DB2011	No reform as measured by Doing Business.
DB2012	No reform as measured by Doing Business.
DB2013	No reform as measured by Doing Business.

Note: For information on reforms in earlier years (back to DB2006), see the *Doing Business* reports for these years, available at <http://www.doingbusiness.org>.

Source: *Doing Business* database.

PAYING TAXES

What are the details?

The indicators reported here for Luxembourg are based on a standard set of taxes and contributions that would be paid by the case study company used by *Doing Business* in collecting the data (see the section in this chapter on what the indicators cover). Tax practitioners are asked to review standard financial statements as well as a standard list of transactions that the company completed during the year. Respondents are asked how much in taxes and mandatory contributions the business must pay and what the process is for doing so.

LOCATION OF STANDARDIZED COMPANY

City: Luxembourg

The taxes and contributions paid are listed in the summary below, along with the associated number of payments, time and tax rate.

Summary of tax rates and administrative burden in Luxembourg

Indicator	Luxembourg	OECD high income average	OECD high income average
Payments (number per year)	23		12
Time (hours per year)	59		176
Profit tax (%)	4.1		15.2
Labor tax and contributions (%)	15.4		23.8
Other taxes (%)	1.5		3.7
Total tax rate (% profit)	21.0		42.7

Note: In cases where an economy's regional classification is "OECD high income," regional averages above are only displayed once.

Tax or mandatory contribution	Payments (number)	Notes on payments	Time (hours)	Statutory tax rate	Tax base	Total tax rate (% of profit)	Notes on total tax rate
Social security contributions	12		14	12.31%-14.56%	gross salaries	15.4	
Corporate income tax	0	paid jointly	21	22%	taxable profit	4.1	CIT rate is 22.05% for 2011.

Tax or mandatory contribution	Payments (number)	Notes on payments	Time (hours)	Statutory tax rate	Tax base	Total tax rate (% of profit)	Notes on total tax rate
Municipal tax	5		0	7%	taxable profits with an allowance of EUR 17,500	4.1	included in other taxes
Fuel tax	1		0		included in fuel price	1	
Property tax	1		0	750%	0.9% to 1% of unitary value	0.3	
Net wealth tax	0	paid jointly	0	1%	equity	0.1	
Tax on insurance contracts	1		0	4%	insurance premium	0.1	
Stamp duty	1		0	EUR 1.86-9.92	paper size	0	small amount
Value added tax (VAT)	1	online filing	24	15%	value added	0	not included
Vehicle tax	1		0	varies	vehicle weight	0	
Totals	23		59			21.0	

Source: Doing Business database.

TRADING ACROSS BORDERS

In today's globalized world, making trade between economies easier is increasingly important for business. Excessive document requirements, burdensome customs procedures, inefficient port operations and inadequate infrastructure all lead to extra costs and delays for exporters and importers, stifling trade potential. Research shows that exporters in developing countries gain more from a 10% drop in their trading costs than from a similar reduction in the tariffs applied to their products in global markets.

What do the indicators cover?

Doing Business measures the time and cost (excluding tariffs and the time and cost for sea transport) associated with exporting and importing a standard shipment of goods by sea transport, and the number of documents necessary to complete the transaction. The indicators cover procedural requirements such as documentation requirements and procedures at customs and other regulatory agencies as well as at the port. They also cover trade logistics, including the time and cost of inland transport to the largest business city. The ranking on the ease of trading across borders is the simple average of the percentile rankings on its component indicators: documents, time and cost to export and import.

To make the data comparable across economies, *Doing Business* uses several assumptions about the business and the traded goods.

The business:

- Is of medium size and employs 60 people.
- Is located in the periurban area of the economy's largest business city.
- Is a private, limited liability company, domestically owned, formally registered and operating under commercial laws and regulations of the economy.

The traded goods:

- Are not hazardous nor do they include military items.

WHAT THE TRADING ACROSS BORDERS INDICATORS MEASURE

Documents required to export and import (number)

- Bank documents
- Customs clearance documents
- Port and terminal handling documents
- Transport documents

Time required to export and import (days)

- Obtaining, filling out and submitting all the documents
- Inland transport and handling
- Customs clearance and inspections
- Port and terminal handling
- Does not include sea transport time

Cost required to export and import (US\$ per container)

- All documentation
- Inland transport and handling
- Customs clearance and inspections
- Port and terminal handling
- Official costs only, no bribes

- Do not require refrigeration or any other special environment.
- Do not require any special phytosanitary or environmental safety standards other than accepted international standards.
- Are one of the economy's leading export or import products.
- Are transported in a dry-cargo, 20-foot full container load.

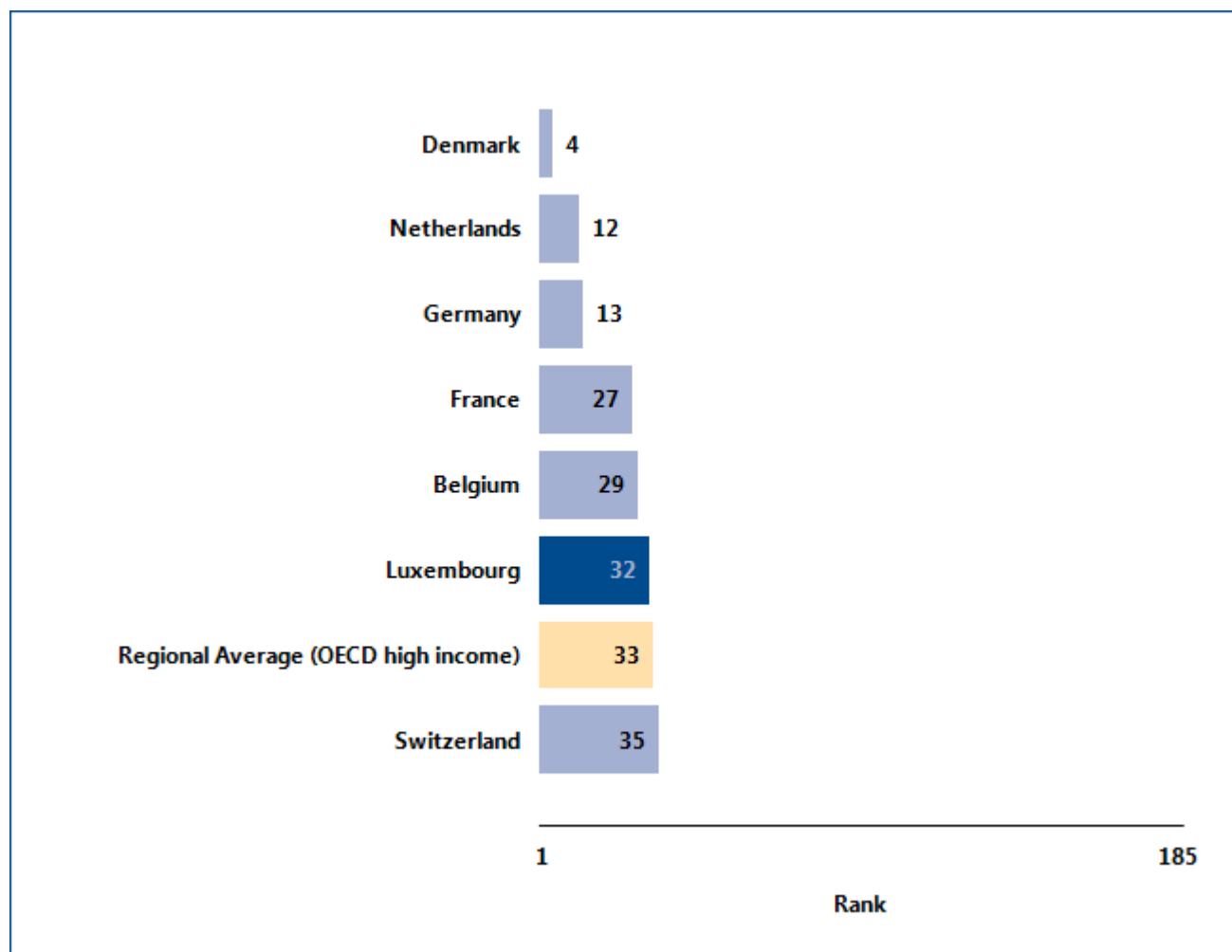
TRADING ACROSS BORDERS

Where does the economy stand today?

What does it take to export or import in Luxembourg? According to data collected by *Doing Business*, exporting a standard container of goods requires 5 documents, takes 7 days and costs \$1420. Importing the same container of goods requires 4 documents, takes 7 days and costs \$1420 (see the summary of procedures and documents at the end of this chapter for details).

Globally, Luxembourg stands at 32 in the ranking of 185 economies on the ease of trading across borders (figure 9.1). The rankings for comparator economies and the regional average ranking provide other useful information for assessing how easy it is for a business in Luxembourg to export and import goods.

Figure 9.1 How Luxembourg and comparator economies rank on the ease of trading across borders



Source: *Doing Business* database.

TRADING ACROSS BORDERS

What are the changes over time?

While the most recent *Doing Business* data reflect how easy (or difficult) it is to export or import in Luxembourg today, data over time show which aspects of the process have changed—and which have not (table 9.1). That can help identify where the potential for improvement is greatest.

Table 9.1 The ease of trading across borders in Luxembourg over time
By *Doing Business* report year

Indicator	DB2006	DB2007	DB2008	DB2009	DB2010	DB2011	DB2012	DB2013
Rank	..	..	..	..	..	..	33	32
Documents to export (number)	n.a.	5	5	5	5	5	5	5
Time to export (days)	n.a.	7	7	7	7	7	7	7
Cost to export (US\$ per container)	n.a.	1,250	1,250	1,420	1,420	1,420	1,420	1,420
Documents to import (number)	n.a.	4	4	4	4	4	4	4
Time to import (days)	n.a.	7	7	7	7	7	7	7
Cost to import (US\$ per container)	n.a.	1,250	1,250	1,420	1,420	1,420	1,420	1,420

Note: n.a. = not applicable (the economy was not included in *Doing Business* for that year). DB2012 rankings shown are not last year's published rankings but comparable rankings for DB2012 that capture the effects of such factors as data corrections and the addition of 2 economies (Barbados and Malta) to the sample this year.

Source: *Doing Business* database.

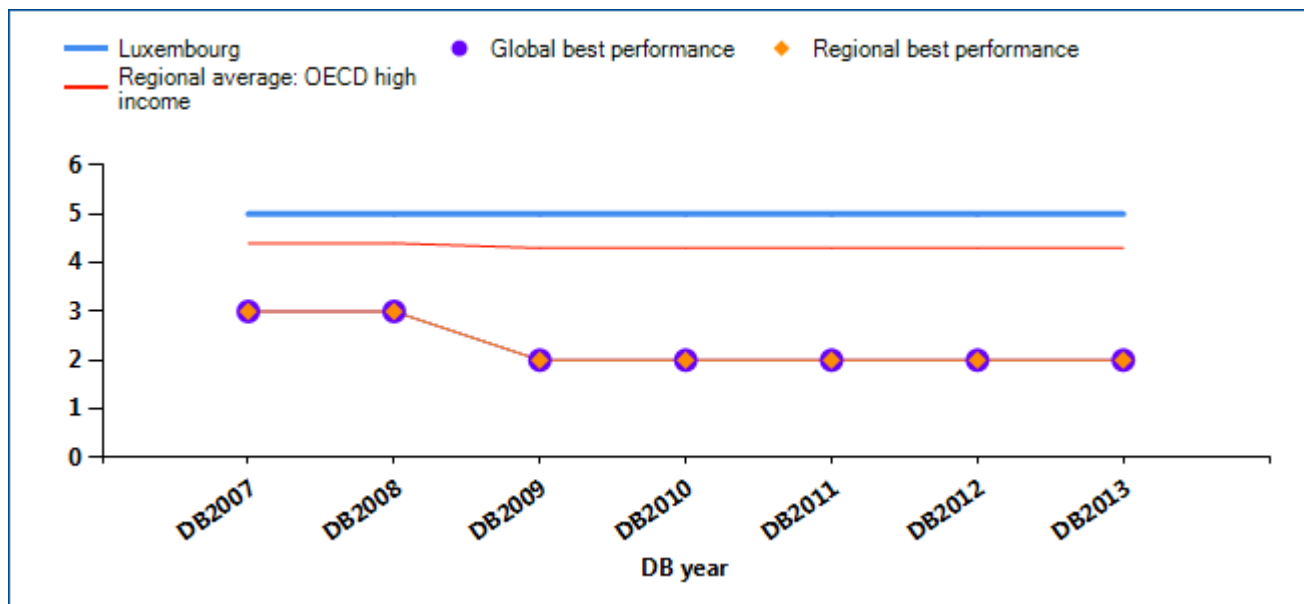
TRADING ACROSS BORDERS

Equally helpful may be the benchmarks provided by the economies that over time have had the best performance regionally or globally on the documents, time or cost required to export or import (figure 9.2).

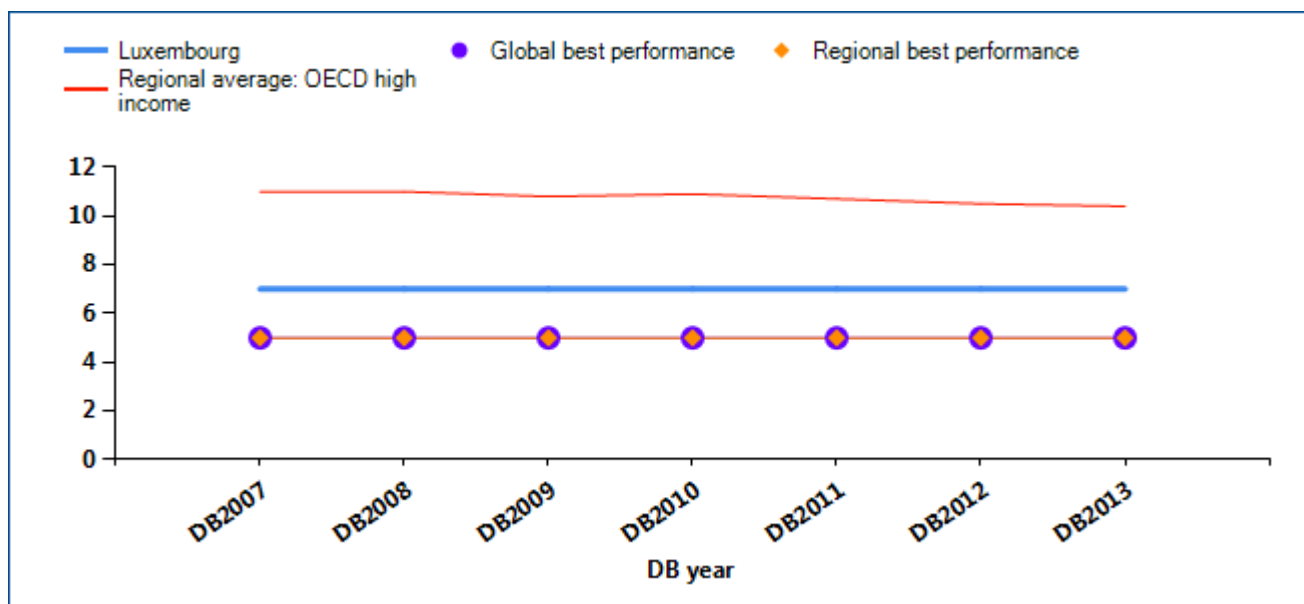
These benchmarks help show what is possible in making it easier to trade across borders. And changes in regional averages can show where Luxembourg is keeping up—and where it is falling behind.

Figure 9.2 Has trading across borders become easier over time?

Documents to export (number)

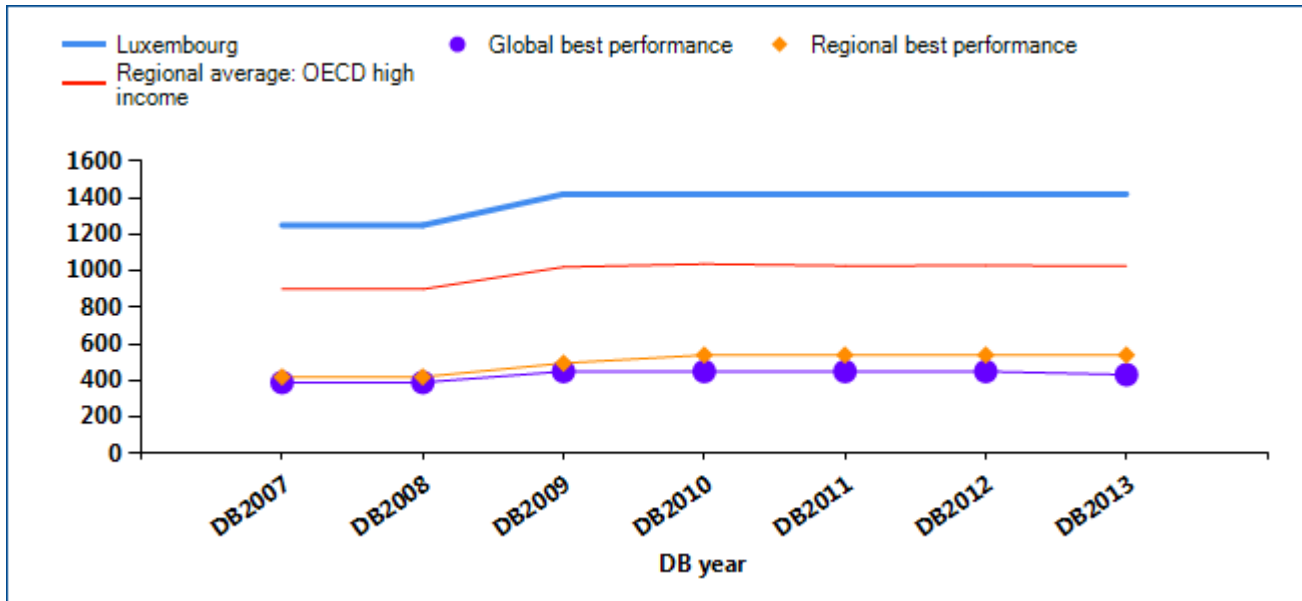


Time to export (days)

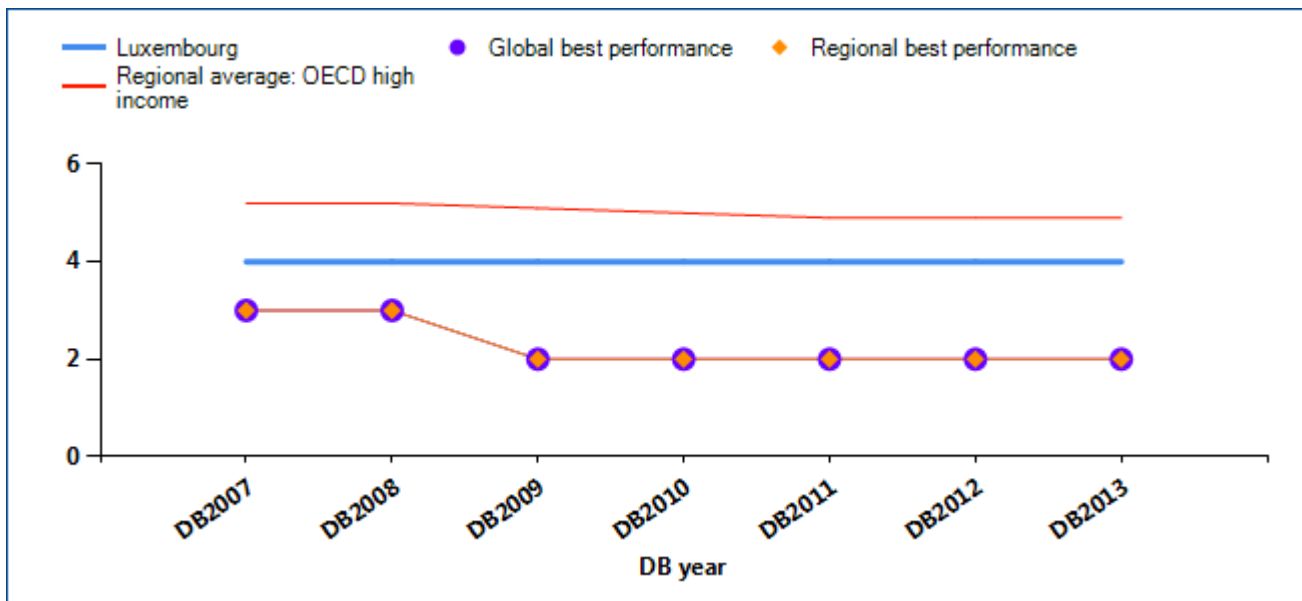


TRADING ACROSS BORDERS

Cost to export (US\$ per container)

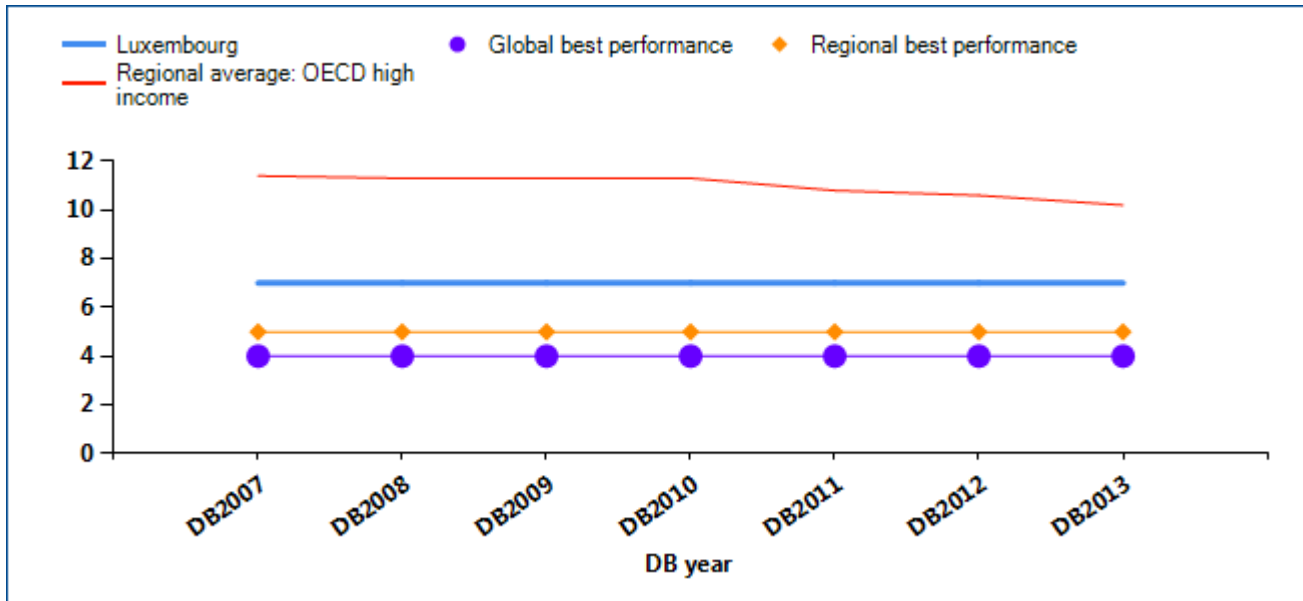


Documents to import (number)

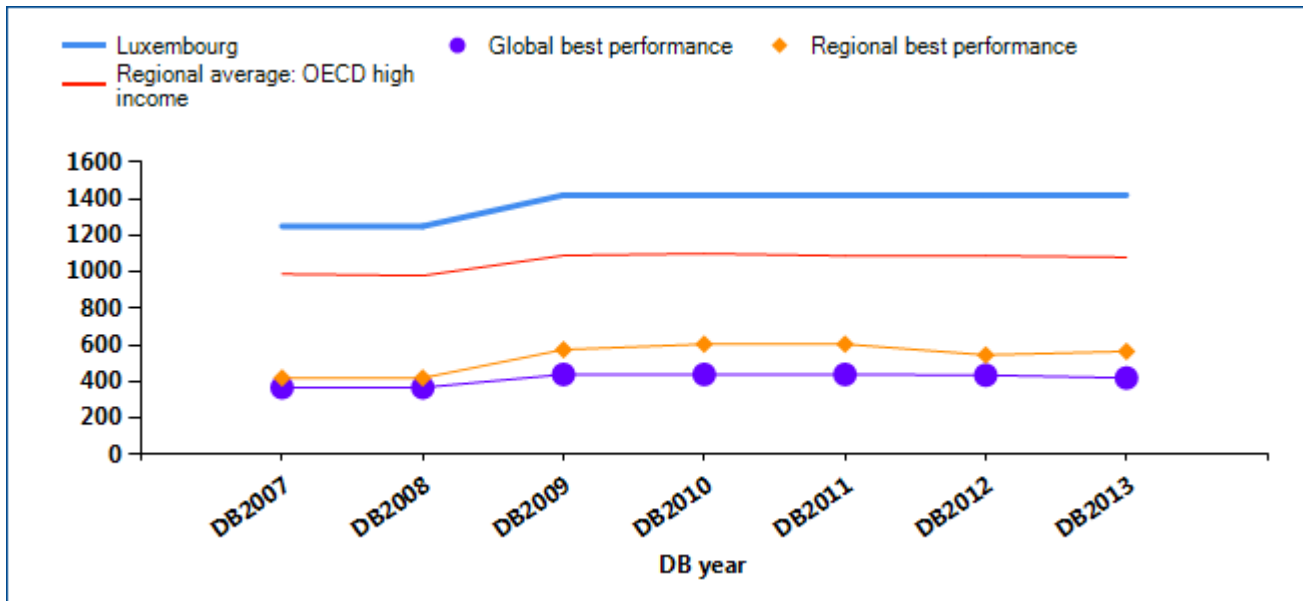


TRADING ACROSS BORDERS

Time to import (days)



Cost to import (US\$ per container)



Source: Doing Business database.

TRADING ACROSS BORDERS

In economies around the world, trading across borders as measured by *Doing Business* has become faster and easier over the years. Governments have introduced tools to facilitate trade—including single windows, risk-based inspections and electronic data interchange

systems. These changes help improve the trading environment and boost firms' international competitiveness. What trade reforms has *Doing Business* recorded in Luxembourg (table 9.2)?

Table 9.2 How has Luxembourg made trading across borders easier—or not?
By *Doing Business* report year

DB year	Reform
DB2008	No reform as measured by Doing Business.
DB2009	No reform as measured by Doing Business.
DB2010	No reform as measured by Doing Business.
DB2011	No reform as measured by Doing Business.
DB2012	No reform as measured by Doing Business.
DB2013	No reform as measured by Doing Business.

Note: For information on reforms in earlier years (back to DB2006), see the *Doing Business* reports for these years, available at <http://www.doingbusiness.org>.

Source: *Doing Business* database.

TRADING ACROSS BORDERS

What are the details?

The indicators reported here for Luxembourg are based on a set of specific procedural requirements for trading a standard shipment of goods by ocean transport (see the section in this chapter on what the indicators cover). Information on the procedures as well as the required documents and the time and cost to complete each procedure is collected from local freight forwarders, shipping lines, customs brokers, port officials and banks.

LOCATION OF STANDARDIZED COMPANY

City: Luxembourg

The procedural requirements, and the associated time and cost, for exporting and importing a standard shipment of goods are listed in the summary below, along with the required documents.

Summary of procedures and documents for trading across borders in Luxembourg

Indicator	Luxembourg	OECD high income average	OECD high income average
Documents to export (number)	5		4
Time to export (days)	7		10
Cost to export (US\$ per container)	1,420		1,028
Documents to import (number)	4		5
Time to import (days)	7		10
Cost to import (US\$ per container)	1,420		1,080

Note: In cases where an economy's regional classification is "OECD high income," regional averages above are only displayed once.

Procedures to export	Time (days)	Cost (US\$)
Documents preparation	2	300
Customs clearance and technical control	2	120
Ports and terminal handling	2	300
Inland transportation and handling	1	700
Totals	7	1,420

Procedures to import	Time (days)	Cost (US\$)
Documents preparation	2	300
Customs clearance and technical control	2	120

Procedures to import	Time (days)	Cost (US\$)
Ports and terminal handling	2	300
Inland transportation and handling	1	700
Totals	7	1,420

Documents to export
Bill of Lading
Commercial invoice
Packing list
Single Administrative Document (Customs export declaration)
Transit document

Documents to import
Bill of lading
Commercial invoice
Packing list
Single Administrative Document (Customs export declaration)

Source: Doing Business database.

ENFORCING CONTRACTS

Well-functioning courts help businesses expand their network and markets. Without effective contract enforcement, people might well do business only with family, friends and others with whom they have established relationships. Where contract enforcement is efficient, firms are more likely to engage with new borrowers or customers, and they have greater access to credit.

What do the indicators cover?

Doing Business measures the efficiency of the judicial system in resolving a commercial dispute before local courts. Following the step-by-step evolution of a standardized case study, it collects data relating to the time, cost and procedural complexity of resolving a commercial lawsuit. The ranking on the ease of enforcing contracts is the simple average of the percentile rankings on its component indicators: procedures, time and cost.

The dispute in the case study involves the breach of a sales contract between 2 domestic businesses. The case study assumes that the court hears an expert on the quality of the goods in dispute. This distinguishes the case from simple debt enforcement. To make the data comparable across economies, *Doing Business* uses several assumptions about the case:

- The seller and buyer are located in the economy's largest business city.
- The buyer orders custom-made goods, then fails to pay.
- The seller sues the buyer before a competent court.
- The value of the claim is 200% of income per capita.
- The seller requests a pretrial attachment to secure the claim.

WHAT THE ENFORCING CONTRACTS INDICATORS MEASURE

Procedures to enforce a contract through the courts (number)

Any interaction between the parties in a commercial dispute, or between them and the judge or court officer

Steps to file and serve the case

Steps for trial and judgment

Steps to enforce the judgment

Time required to complete procedures (calendar days)

Time to file and serve the case

Time for trial and obtaining judgment

Time to enforce the judgment

Cost required to complete procedures (% of claim)

No bribes

Average attorney fees

Court costs

Enforcement costs

- The dispute on the quality of the goods requires an expert opinion.
- The judge decides in favor of the seller; there is no appeal.
- The seller enforces the judgment through a public sale of the buyer's movable assets.

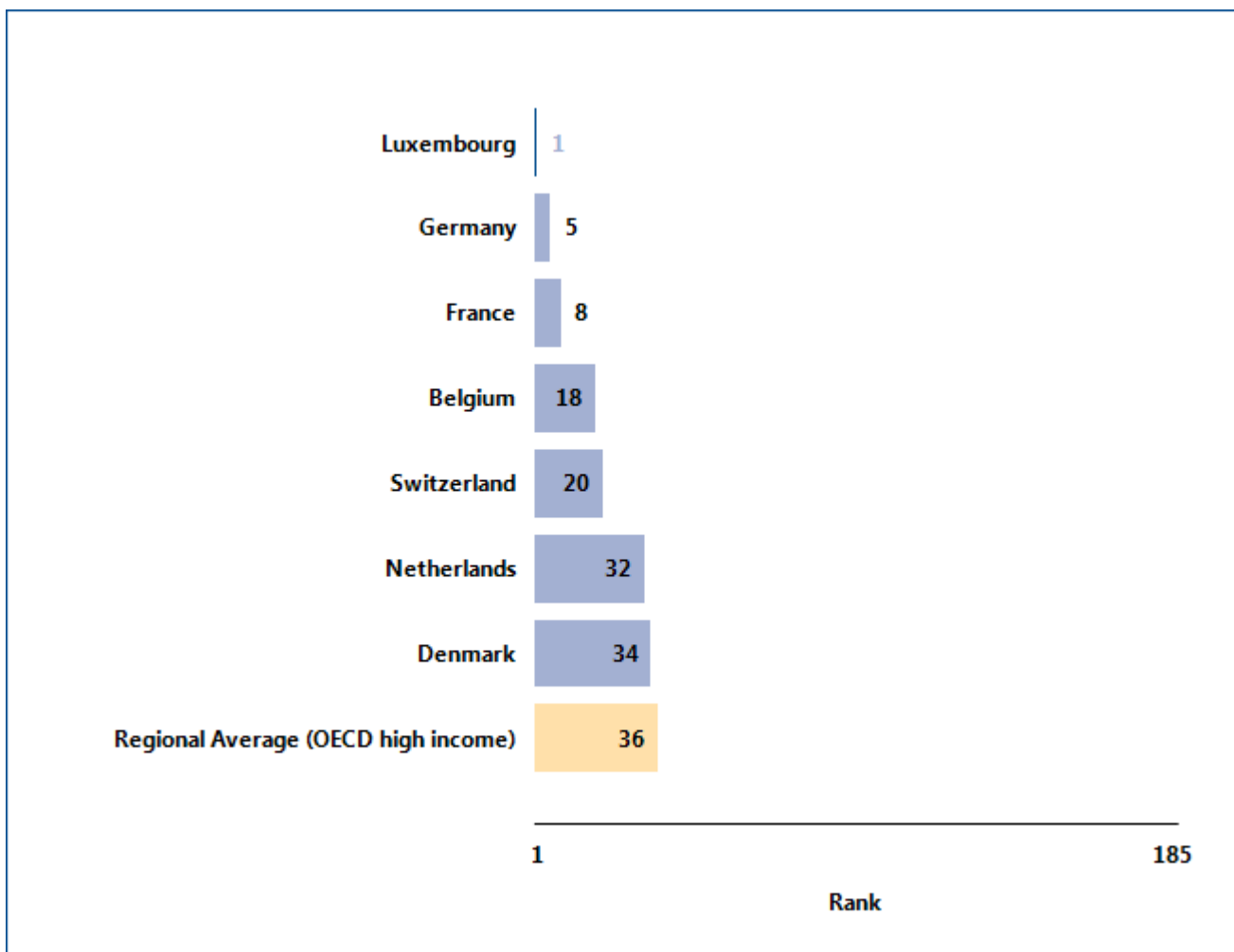
ENFORCING CONTRACTS

Where does the economy stand today?

How efficient is the process of resolving a commercial dispute through the courts in Luxembourg? According to data collected by *Doing Business*, enforcing a contract takes 321 days, costs 9.7% of the value of the claim and requires 26 procedures (see the summary at the end of this chapter for details).

Globally, Luxembourg stands at 1 in the ranking of 185 economies on the ease of enforcing contracts (figure 10.1). The rankings for comparator economies and the regional average ranking provide other useful benchmarks for assessing the efficiency of contract enforcement in Luxembourg.

Figure 10.1 How Luxembourg and comparator economies rank on the ease of enforcing contracts



Source: *Doing Business* database.

ENFORCING CONTRACTS

What are the changes over time?

While the most recent *Doing Business* data reflect how easy (or difficult) it is to enforce a contract in Luxembourg today, data on the underlying indicators over time help identify which areas have changed and where the potential for improvement is greatest (table 10.1).

Table 10.1 The ease of enforcing contracts in Luxembourg over time

By *Doing Business* report year

Indicator	DB2004	DB2005	DB2006	DB2007	DB2008	DB2009	DB2010	DB2011	DB2012	DB2013
Rank	..	..	..	..	..	..	..	..	1	1
Time (days)	n.a.	n.a.	n.a.	321	321	321	321	321	321	321
Cost (% of claim)	n.a.	n.a.	n.a.	8.8	8.8	8.8	9.7	9.7	9.7	9.7
Procedures (number)	n.a.	n.a.	n.a.	26	26	26	26	26	26	26

Note: n.a. = not applicable (the economy was not included in *Doing Business* for that year). DB2012 rankings shown are not last year's published rankings but comparable rankings for DB2012 that capture the effects of such factors as data corrections and the addition of 2 economies (Barbados and Malta) to the sample this year.

Source: *Doing Business* database.

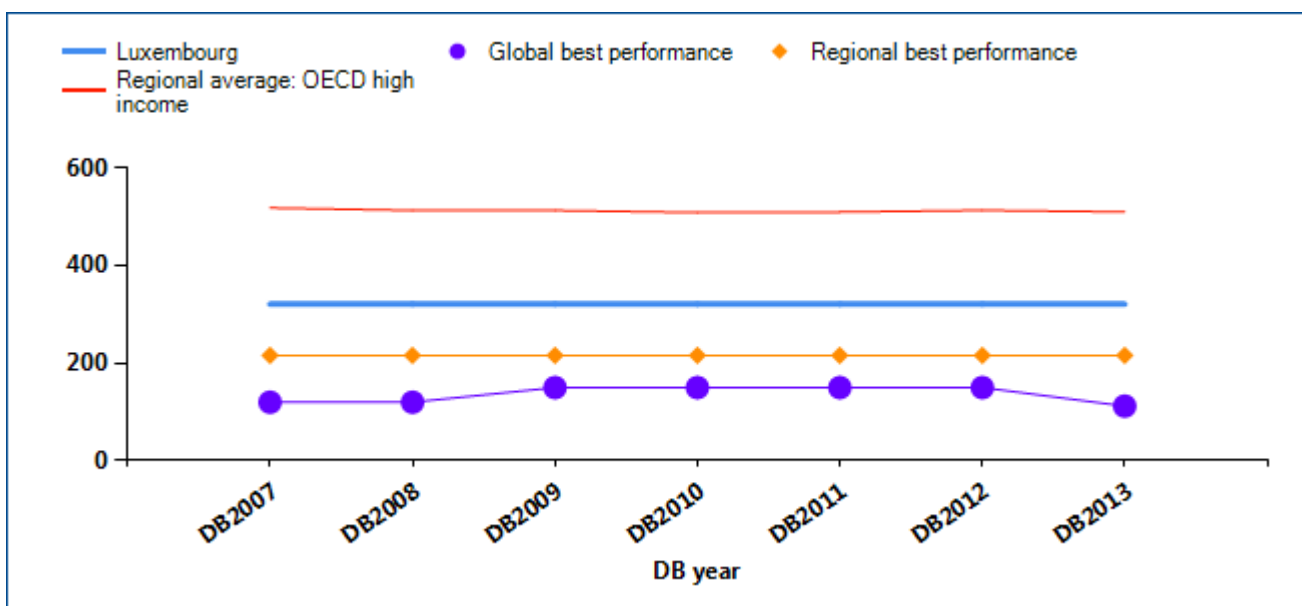
ENFORCING CONTRACTS

Equally helpful may be the benchmarks provided by the economies that over time have had the best performance regionally or globally on the number of steps, time or cost required to enforce a contract through the courts (figure 10.2). These benchmarks

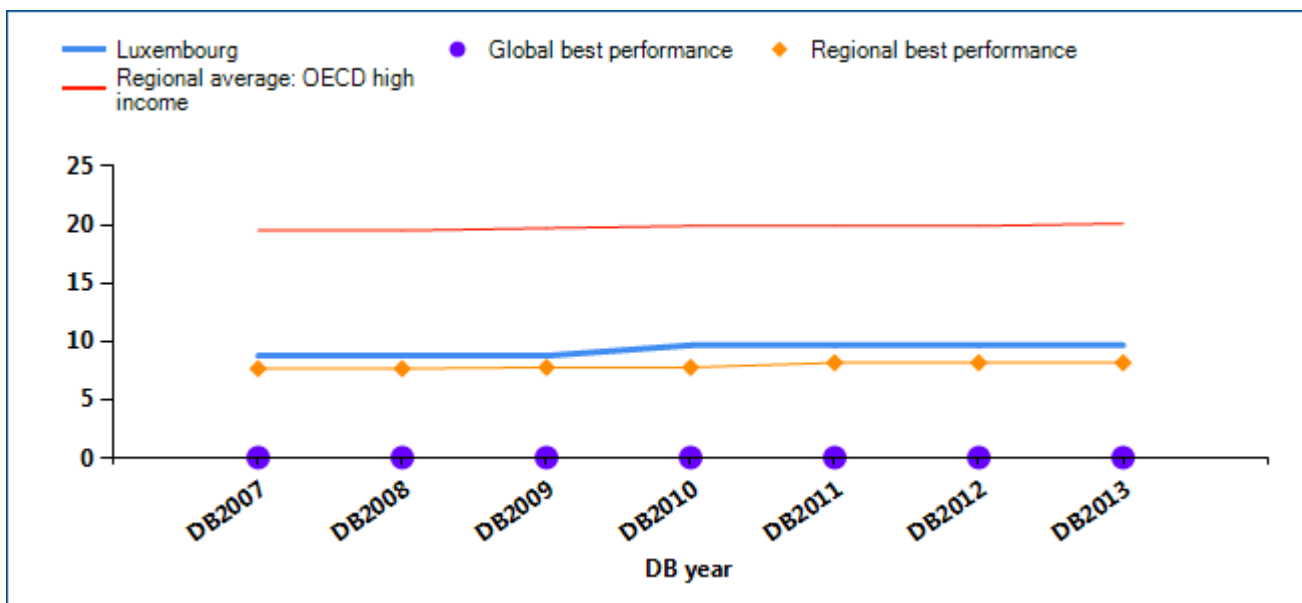
help show what is possible in improving the efficiency of contract enforcement. And changes in regional averages can show where Luxembourg is keeping up—and where it is falling behind.

Figure 10.2 Has enforcing contracts become easier over time?

Time (days)

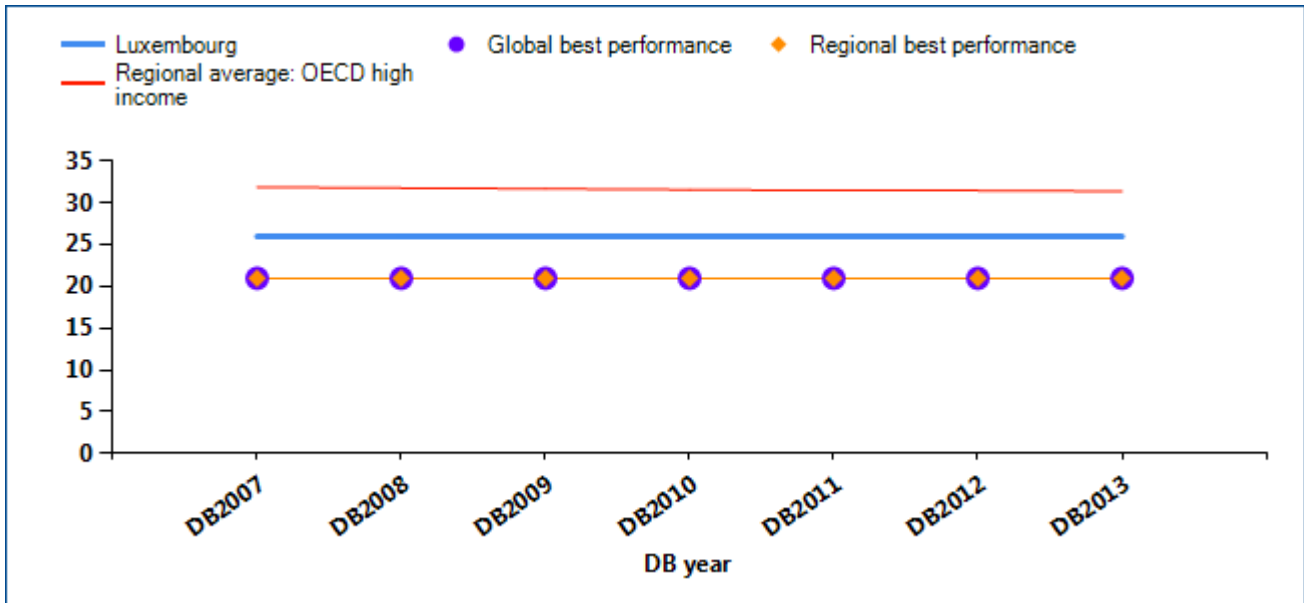


Cost (% of claim)



ENFORCING CONTRACTS

Procedures (number)



Source: Doing Business database.

ENFORCING CONTRACTS

Economies in all regions have improved contract enforcement in recent years. A judiciary can be improved in different ways. Higher-income economies tend to look for ways to enhance efficiency by introducing new technology. Lower-income economies often work on reducing backlogs by introducing

periodic reviews to clear inactive cases from the docket and by making procedures faster. What reforms making it easier (or more difficult) to enforce contracts has *Doing Business* recorded in Luxembourg (table 10.2)?

Table 10.2 How has Luxembourg made enforcing contracts easier—or not?

By *Doing Business* report year

DB year	Reform
DB2008	No reform as measured by Doing Business.
DB2009	No reform as measured by Doing Business.
DB2010	No reform as measured by Doing Business.
DB2011	No reform as measured by Doing Business.
DB2012	No reform as measured by Doing Business.
DB2013	No reform as measured by Doing Business.

Note: For information on reforms in earlier years (back to DB2005), see the *Doing Business* reports for these years, available at <http://www.doingbusiness.org>.

Source: *Doing Business* database.

ENFORCING CONTRACTS

What are the details?

The indicators reported here for Luxembourg are based on a set of specific procedural steps required to resolve a standardized commercial dispute through the courts (see the section in this chapter on what the indicators cover). These procedures, and the time and cost of completing them, are identified through study of the codes of civil procedure and other court regulations, as well as through surveys completed by local litigation lawyers (and, in a quarter of the economies covered by *Doing Business*, by judges as well).

COMPETENT COURT

City: Luxembourg

The procedures for resolving a commercial lawsuit, and the associated time and cost, are listed in the summary below.

Summary of procedures for enforcing a contract in Luxembourg—and the time and cost

Indicator	Luxembourg	OECD high income average	OECD high income average
Time (days)	321	510	510
Filing and service	21		
Trial and judgment	240		
Enforcement of judgment	60		
Cost (% of claim)	9.7	20.1	20.1
Attorney cost (% of claim)	8.7		
Court cost (% of claim)	0.1		
Enforcement Cost (% of claim)	0.9		
Procedures (number)	26	31	31

Note: In cases where an economy's regional classification is "OECD high income," regional averages above are only displayed once.

ENFORCING CONTRACTS

No.	Procedure
	Filing and service:
1	Plaintiff requests payment: Plaintiff or his lawyer asks Defendant orally or in writing to comply with the contract.
2	Plaintiff's hiring of lawyer: Plaintiff hires a lawyer to represent him before the court.
3	Registration of court case: The court administration registers the lawsuit or court case. This includes assigning a reference number to the lawsuit or court case.
*	Assignment of court case to a judge: The court case is assigned to a specific judge through a random procedure, automated system, ruling of an administrative judge, court officer, etc.
*	Arrangements for physical delivery of summons and complaint: Plaintiff takes whatever steps are necessary to arrange for physical service of process on Defendant, such as instructing a court officer or a (private) bailiff.
*	Mailing of summons and complaint: Court or process server, including (private) bailiff, mails summons and complaint to Defendant.
4	First attempt at physical delivery: A first attempt to physically deliver summons and complaint to Defendant is successful in the majority of cases.
*	Proof of service: Plaintiff submits proof of service to court.
*	Application for pre-judgment attachment: Plaintiff submits an application in writing for the attachment of Defendant's property prior to judgment. (see assumption 5)
*	Decision on pre-judgment attachment: The judge decides whether to grant Plaintiff's request for pre-judgment attachment of Defendant's property and notifies Plaintiff and Defendant of the decision. This step may include requesting that Plaintiff submit guarantees or bonds to secure Defendant
5	Pre-judgment attachment.: Defendant's property is attached prior to judgment. Attachment is either physical or achieved by registering, marking, debiting or separating assets. (see assumption 5)
6	Report on pre-judgment attachment: Court enforcement officer or (private) bailiff issues and delivers a report on the attachment of Defendant's property to the judge. (see assumption 5)
	Trial and judgment:
*	Defendant's filing of preliminary exemptions: Defendant presents preliminary exemptions to the court. Preliminary exemptions differ from answers on the merits of the claim. Examples of preliminary exemptions are statute of limitations, jurisdictions, etc.
*	Plaintiff's answer to preliminary exemptions: Plaintiff responds to the preliminary exemptions raised by Defendant.
7	Defendant's filing of defense or answer to Plaintiff's claim: Defendant files a written pleading which includes his defense or answer on the merits of the case. Defendant's written answer may or may not include witness statements, expert statements, the documents Defendant relies on as evidence and the legal authori

No.	Procedure
8	Plaintiff's written response to Defendant's defense or answer: Plaintiff responds to Defendant's defense or answer with a written pleading. Plaintiff's answer may or may not include a witness statements or expert (witness) statements.
*	Court appointment of independent expert: Judge appoints, either at the parties' request or at his own initiative, an independent expert to decide whether the quality of the goods Plaintiff delivered to Defendant is adequate. (see assumption 6-b of this case)
9	Notification of court-appointment of independent expert: The court notifies both parties that the court is appointing an independent expert. (see assumption 6-b of this case)
*	Delivery of expert report by court-appointed expert: The independent expert appointed by the court delivers his or her expert report to the court. (see assumption 6-b of this case)
*	Setting of date(s) for oral hearing or trial: The judge sets the date(s) for the oral hearing or trial.
10	Oral hearing (prevalent in civil law): The parties argue the merits of the case at an oral hearing before the judge. Witnesses and a court-appointed independent expert may be heard and questioned at the oral hearing.
*	Request for closing of the evidence period: Plaintiff or Defendant requests the judge to close the evidence period.
11	Closing of the evidence period: The court makes the formal decision to close the evidence period.
12	Judgment date: The judge sets a date for delivery of the judgment.
13	Writing of judgment: The judge produces a written copy of the judgment.
14	Registration of judgment: The court office registers the judgment after receiving a written copy of the judgment.
15	Court notification of availability of the written judgment: The court notifies the parties that the written judgment is available at the courthouse.
16	Plaintiff's receipt of a copy of written judgment: Plaintiff receives a copy of the written judgment.
17	Notification of Defendant of judgment: Plaintiff or court formally notifies the Defendant of the judgment. The appeal period starts to run the day the Defendant is formally notified of the judgment.
18	Appeal period: By law, Defendant has the opportunity to appeal the judgment during a period specified in the law. Defendant decides not to appeal. Judgment becomes final the day the appeal period ends.
Enforcement of judgment:	
19	Plaintiff's approaching of court enforcement officer or (private) bailiff to enforce the judgment: To enforce the judgment, Plaintiff approaches a court enforcement officer such as a court bailiff or sheriff, or a private bailiff.
*	Plaintiff's request for enforcement order: Plaintiff applies to the court to obtain the enforcement order ('seal' on judgment).
20	Plaintiff's advancement of enforcement fees: Plaintiff pays the fees related to the enforcement of the judgment.
21	Attachment of enforcement order to judgment: The judge attaches the enforcement order ('seal') to the judgment.
*	Delivery of enforcement order: The court's enforcement order is delivered to a court enforcement officer or a (private) bailiff.

No.	Procedure
22	Request to Defendant to comply voluntarily with judgment: Plaintiff, a court enforcement officer or a (private) bailiff requests Defendant to voluntarily comply with the judgment, giving Defendant a last chance to comply voluntarily with the judgment.
23	Plaintiff's identification of Defendant's assets for attachment: Plaintiff identifies Defendant's assets for attachment.
24	Attachment: Defendant's movable goods are attached (physically or by registering, marking or separating assets).
25	Sale through public auction: The Defendant's movable property is sold at public auction.
26	Reimbursement of Plaintiff's enforcement fees: Defendant reimburses Plaintiff's enforcement fees which Plaintiff had advanced previously.
27	Payment: Court orders that the proceeds of the public auction or the direct sale be delivered to Plaintiff.

* Takes place simultaneously with another procedure.

Source: *Doing Business* database.

RESOLVING INSOLVENCY

A robust bankruptcy system functions as a filter, ensuring the survival of economically efficient companies and reallocating the resources of inefficient ones. Fast and cheap insolvency proceedings result in the speedy return of businesses to normal operation and increase returns to creditors. By improving the expectations of creditors and debtors about the outcome of insolvency proceedings, well-functioning insolvency systems can facilitate access to finance, save more viable businesses and thereby improve growth and sustainability in the economy overall.

What do the indicators cover?

Doing Business studies the time, cost and outcome of insolvency proceedings involving domestic entities. It does not measure insolvency proceedings of individuals and financial institutions. The data are derived from survey responses by local insolvency practitioners and verified through a study of laws and regulations as well as public information on bankruptcy systems.

The ranking on the ease of resolving insolvency is based on the recovery rate, which is recorded as cents on the dollar recouped by creditors through reorganization, liquidation or debt enforcement (foreclosure) proceedings. The recovery rate is a function of time, cost and other factors, such as lending rate and the likelihood of the company continuing to operate.

To make the data comparable across economies, *Doing Business* uses several assumptions about the business and the case. It assumes that the company:

- Is a domestically owned, limited liability company operating a hotel.
- Operates in the economy's largest business city.

WHAT THE RESOLVING INSOLVENCY INDICATORS MEASURE

Time required to recover debt (years)

Measured in calendar years

Appeals and requests for extension are included

Cost required to recover debt (% of debtor's estate)

Measured as percentage of estate value

Court fees

Fees of insolvency administrators

Lawyers' fees

Assessors' and auctioneers' fees

Other related fees

Recovery rate for creditors (cents on the dollar)

Measures the cents on the dollar recovered by creditors

Present value of debt recovered

Official costs of the insolvency proceedings are deducted

Depreciation of furniture is taken into account

Outcome for the business (survival or not) affects the maximum value that can be recovered

- Has 201 employees, 1 main secured creditor and 50 unsecured creditors.
- Has a higher value as a going concern—and the efficient outcome is either reorganization or sale as a going concern, not piecemeal liquidation.

RESOLVING INSOLVENCY

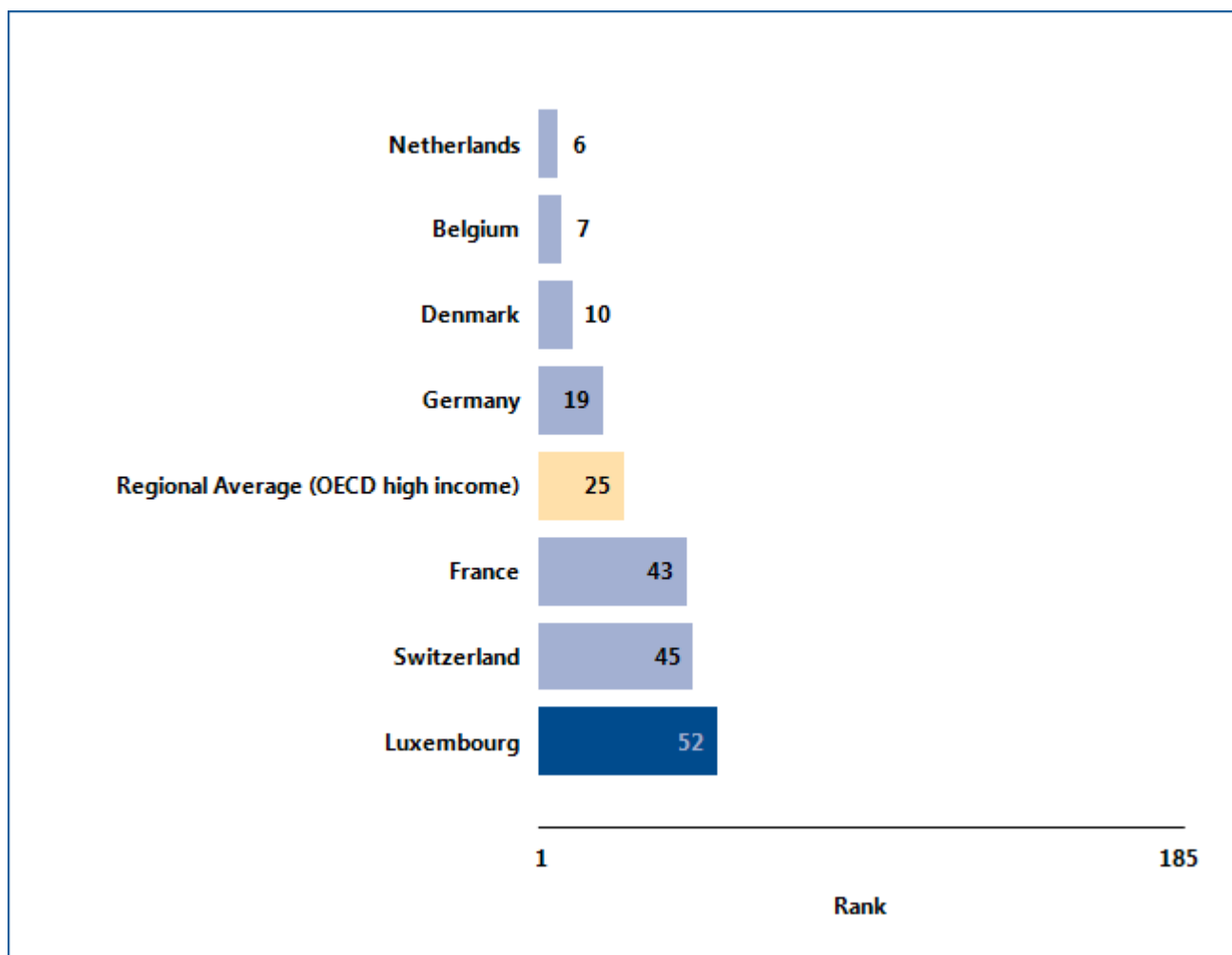
Where does the economy stand today?

Speed, low costs and continuation of viable businesses characterize the top-performing economies. How efficient are insolvency proceedings in Luxembourg? According to data collected by *Doing Business*, resolving insolvency takes 2.0 years on average and costs 15% of the debtor’s estate, with the most likely outcome being that the company will be sold as

piecemeal sale. The average recovery rate is 43.5 cents on the dollar.

Globally, Luxembourg stands at 52 in the ranking of 185 economies on the ease of resolving insolvency (figure 11.1). The rankings for comparator economies and the regional average ranking provide other useful benchmarks for assessing the efficiency of insolvency proceedings in Luxembourg.

Figure 11.1 How Luxembourg and comparator economies rank on the ease of resolving insolvency



Source: *Doing Business* database.

RESOLVING INSOLVENCY

What are the changes over time?

While the most recent *Doing Business* data reflect the efficiency of insolvency proceedings in Luxembourg today, data over time show where the efficiency has changed—and where it has not (table 11.1). That can help identify where the potential for improvement is greatest.

Table 11.1 The ease of resolving insolvency in Luxembourg over time
By *Doing Business* report year

Indicator	DB2004	DB2005	DB2006	DB2007	DB2008	DB2009	DB2010	DB2011	DB2012	DB2013
Rank	..	..	..	..	..	..	..	..	50	52
Time (years)	n.a.	n.a.	n.a.	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Cost (% of estate)	n.a.	n.a.	n.a.	15	15	15	15	15	15	15
Recovery rate (cents on the dollar)	n.a.	n.a.	n.a.	41.6	41.6	41.7	41.7	43.7	43.5	43.5

Note: n.a. = not applicable (the economy was not included in *Doing Business* for that year). DB2012 rankings shown are not last year's published rankings but comparable rankings for DB2012 that capture the effects of such factors as data corrections and the addition of 2 economies (Barbados and Malta) to the sample this year. "No practice" indicates that in each of the previous 5 years the economy had no cases involving a judicial reorganization, judicial liquidation or debt enforcement procedure (foreclosure). This means that creditors are unlikely to recover their money through a formal legal process (in or out of court). The recovery rate for "no practice" economies is 0.

Source: *Doing Business* database.

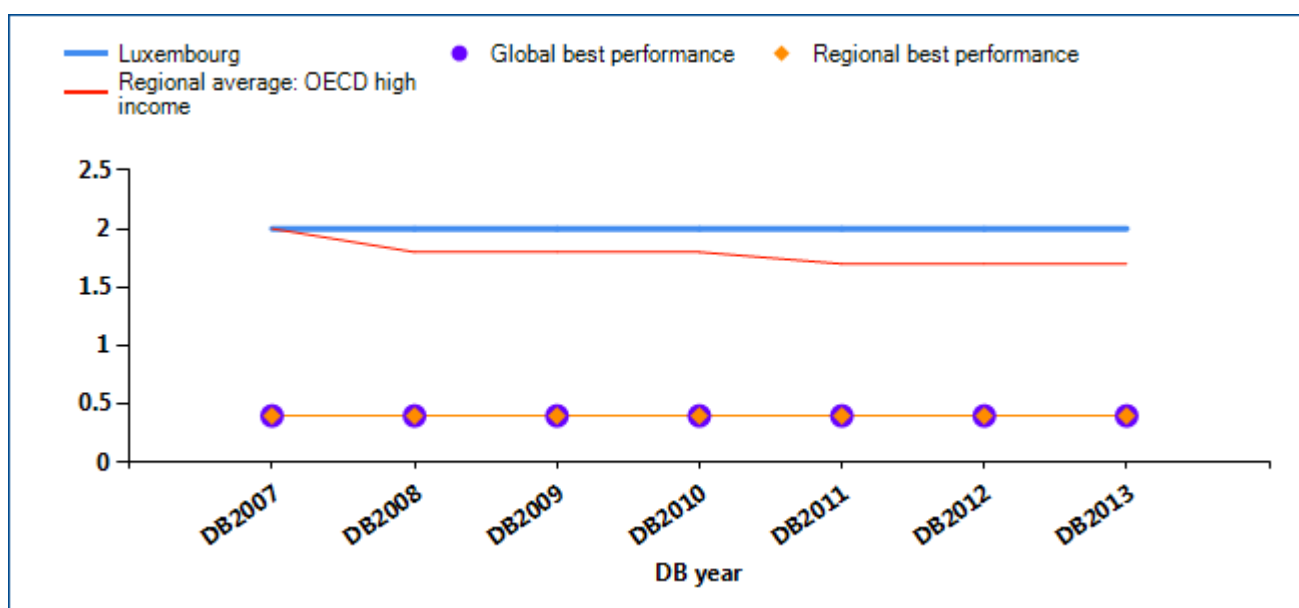
RESOLVING INSOLVENCY

Equally helpful may be the benchmarks provided by the economies that over time have had the best performance regionally or globally on the time or cost of insolvency proceedings or on the recovery rate (figure 11.2). These benchmarks help show what is

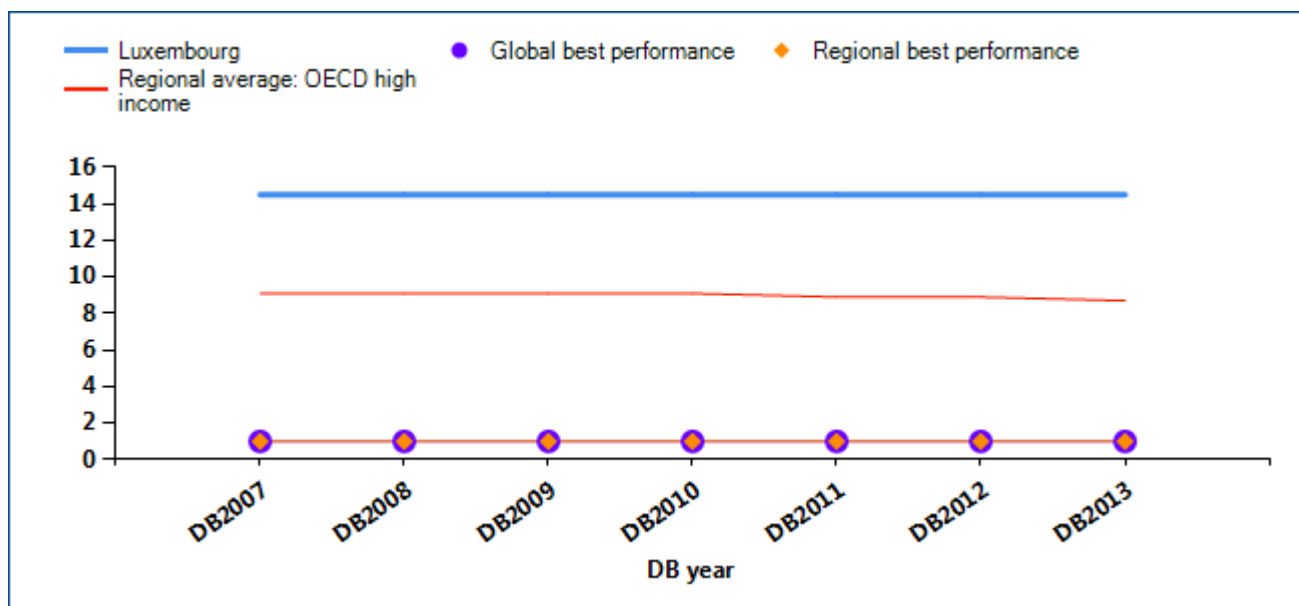
possible in improving the efficiency of insolvency proceedings. And changes in regional averages can show where Luxembourg is keeping up—and where it is falling behind.

Figure 11.2 Has resolving insolvency become easier over time?

Time (years)

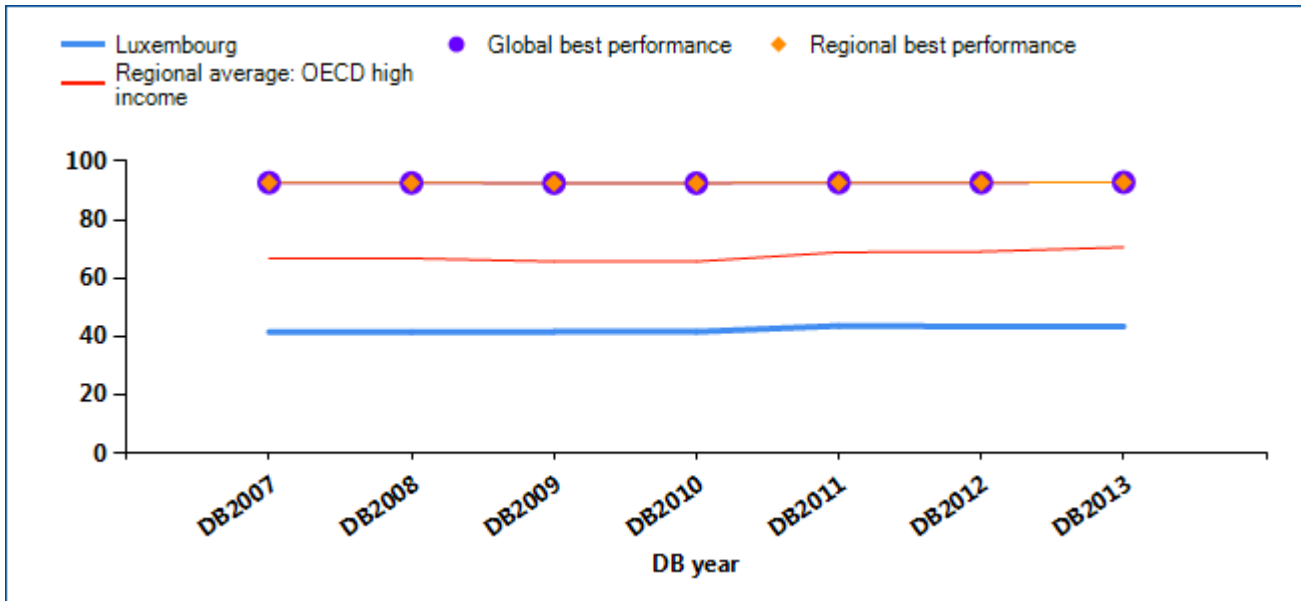


Cost (% of estate)



RESOLVING INSOLVENCY

Recovery rate (cents on the dollar)



Note: Regional averages on time and cost exclude economies with a “no practice” mark.

Source: Doing Business database.

RESOLVING INSOLVENCY

A well-balanced bankruptcy system distinguishes companies that are financially distressed but economically viable from inefficient companies that should be liquidated. But in some insolvency systems even viable businesses are liquidated. This is starting to

change. Many recent reforms of bankruptcy laws have been aimed at helping more of the viable businesses survive. What insolvency reforms has *Doing Business* recorded in Luxembourg (table 11.2)?

Table 11.2 How has Luxembourg made resolving insolvency easier—or not?

By *Doing Business* report year

DB year	Reform
DB2008	No reform as measured by Doing Business.
DB2009	No reform as measured by Doing Business.
DB2010	No reform as measured by Doing Business.
DB2011	No reform as measured by Doing Business.
DB2012	No reform as measured by Doing Business.
DB2013	No reform as measured by Doing Business.

Note: For information on reforms in earlier years (back to DB2005), see the *Doing Business* reports for these years, available at <http://www.doingbusiness.org>.

Source: *Doing Business* database.

EMPLOYING WORKERS

Doing Business measures flexibility in the regulation of employment, specifically as it affects the hiring and redundancy of workers and the rigidity of working hours. From 2007 to 2011 improvements were made to align the methodology for the employing workers indicators with the letter and spirit of the International Labour Organization (ILO) conventions. Only 4 of the 188 ILO conventions cover areas measured by *Doing Business*: employee termination, weekend work, holiday with pay and night work. The *Doing Business* methodology is fully consistent with these 4 conventions. The ILO conventions covering areas related to the employing workers indicators do not include the ILO core labor standards—8 conventions covering the right to collective bargaining, the elimination of forced labor, the abolition of child labor and equitable treatment in employment practices.

Between 2009 and 2011 the World Bank Group worked with a consultative group—including labor lawyers, employer and employee representatives, and experts from the ILO, the Organisation for Economic Co-operation and Development, civil society and the private sector—to review the employing workers methodology and explore future areas of research.

A full report with the conclusions of the consultative group is available at <http://www.doingbusiness.org/methodology/employing-workers>.

Doing Business 2013 does not present rankings of economies on the employing workers indicators or include the topic in the aggregate ranking on the ease of doing business. The report does present the data on the employing workers indicators in an annex. Detailed data collected on labor regulations are available on the *Doing Business* website (<http://www.doingbusiness.org>).

Particular data for Luxembourg are presented here without scoring.

To make the data on employing workers comparable across economies, several assumptions about the worker and the business are used.

The worker:

- Earns a salary plus benefits equal to the economy's average wage during the entire period of his employment.
- Has a pay period that is the most common for workers in the economy.
- Is a lawful citizen who belongs to the same race and religion as the majority of the economy's population.
- Resides in the economy's largest business city.
- Is not a member of a labor union, unless membership is mandatory.

The business:

- Is a limited liability company.
- Operates in the economy's largest business city.
- Is 100% domestically owned.
- Operates in the manufacturing sector.
- Has 60 employees.
- Is subject to collective bargaining agreements in economies where such agreements cover more than half the manufacturing sector and apply even to firms not party to them.
- Abides by every law and regulation but does not grant workers more benefits than mandated by law, regulation or (if applicable) collective bargaining agreement.

EMPLOYING WORKERS

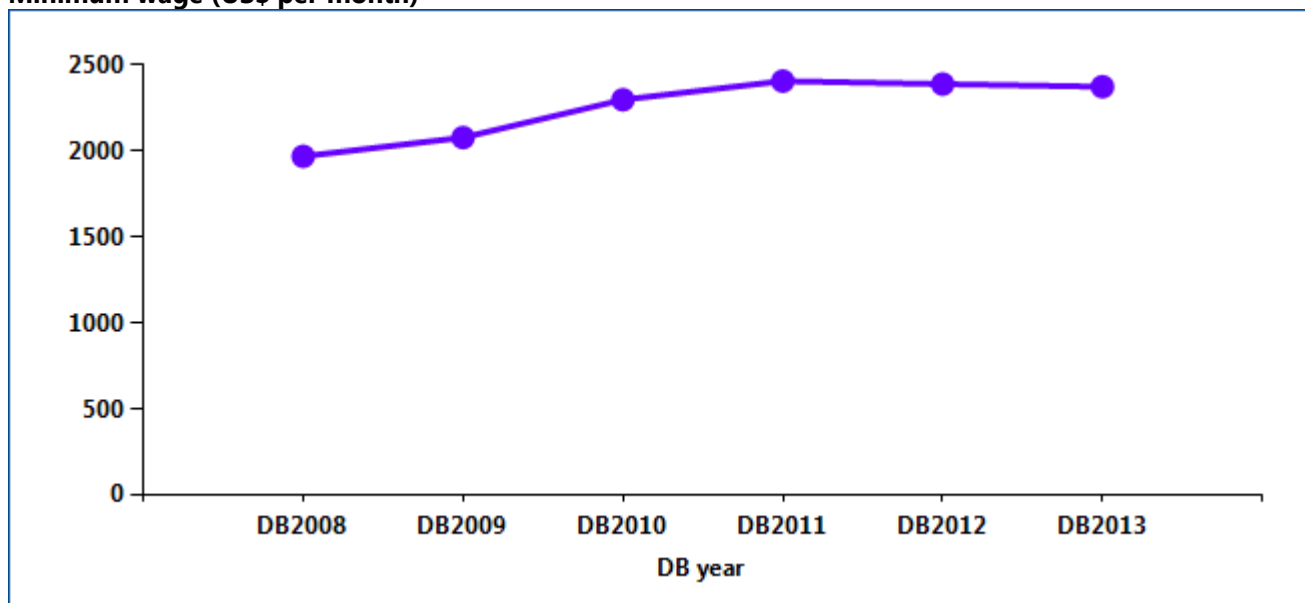
What do some of the data show?

One of the employing workers indicators is the difficulty of hiring index. This measure assesses, among other things, the minimum wage for a 19-year-old

worker in his or her first job. *Doing Business* data show the trend in the minimum wage applied by Luxembourg (figure 12.1).

Figure 12.1 Has the minimum wage for a 19-year-old worker or an apprentice increased over time?

Minimum wage (US\$ per month)



Note: A horizontal line along the x-axis of the figure indicates that the economy has no minimum wage.

Source: *Doing Business* database.

EMPLOYING WORKERS

Employment laws are needed to protect workers from arbitrary or unfair treatment and to ensure efficient contracting between employers and workers. Many economies that changed their labor regulations in the

past 4 years did so in ways that increased labor market flexibility. What changes did Luxembourg adopt that affected the *Doing Business* indicators on employing workers (table 12.1)?

Table 12.1 What changes did Luxembourg make in employing workers in 2012?

Reform
No reform as measured by Doing Business.

Source: *Doing Business* database.

EMPLOYING WORKERS

What are the details?

The data on employing workers reported here for Luxembourg are based on a detailed survey of employment regulations that is completed by local

lawyers and public officials. Employment laws and regulations as well as secondary sources are reviewed to ensure accuracy.

Rigidity of employment index

The rigidity of employment index measures 3 areas of labor regulation: difficulty of hiring, rigidity of hours and difficulty of redundancy.

Difficulty of hiring index

The difficulty of hiring index measures whether fixed-term contracts are prohibited for permanent tasks; the maximum cumulative duration of fixed-term contracts; and the ratio of the minimum wage for a trainee or first-time employee to the average value added per

worker. (The average value added per worker is the ratio of an economy's gross national income per capita to the working-age population as a percentage of the total population.)

Difficulty of hiring index	Data
Fixed-term contracts prohibited for permanent tasks?	Yes
Maximum length of a single fixed-term contract (months)	24 months - Art. L. 122-4 (1)
Maximum length of fixed-term contracts, including renewals (months)	24
Minimum wage for a 19-year old worker or an apprentice (US\$/month)	2374.4
Ratio of minimum wage to value added per worker	0.25

Source: *Doing Business* database.

EMPLOYING WORKERS

Rigidity of hours index

The rigidity of hours index has 5 components: whether there are restrictions on night work; whether there are restrictions on weekly holiday work; whether the workweek can consist of 5.5 days or is more than 6 days; whether the workweek can extend to 50 hours or more (including overtime) for 2 months a year to

respond to a seasonal increase in production; and whether the average paid annual leave for a worker with 1 year of tenure, a worker with 5 years and a worker with 10 years is more than 26 working days or fewer than 15 working days.

Rigidity of hours index	Data
Standard workday in manufacturing (hours)	8 hours
50-hour workweek allowed for 2 months a year in case of a seasonal increase in production?	No
Maximum working days per week	5.5
Premium for night work (% of hourly pay) in case of continuous operations	15%
Premium for work on weekly rest day (% of hourly pay) in case of continuous operations	70%
Major restrictions on night work in case of continuous operations?	No
Major restrictions on weekly holiday in case of continuous operations?	Yes
Paid annual leave for a worker with 1 year of tenure (in working days)	25.0
Paid annual leave for a worker with 5 years of tenure (in working days)	25.0
Paid annual leave for a worker with 10 years of tenure (in working days)	25.0
Paid annual leave (average for workers with 1, 5 and 10 years of tenure, in working days)	25.0

Source: *Doing Business* database.

EMPLOYING WORKERS

Difficulty of redundancy index

The difficulty of redundancy index has 8 components: whether redundancy is disallowed as a basis for terminating workers; whether the employer needs to notify a third party (such as a government agency) to terminate 1 redundant worker; whether the employer needs to notify a third party to terminate a group of 9 redundant workers; whether the employer needs approval from a third party to terminate 1 redundant

worker; whether the employer needs approval from a third party to terminate a group of 9 redundant workers; whether the law requires the employer to reassign or retrain a worker before making the worker redundant; whether priority rules apply for redundancies; and whether priority rules apply for reemployment.

Difficulty of redundancy index	Data
Dismissal due to redundancy allowed by law?	Yes
Third-party notification if 1 worker is dismissed?	Yes
Third-party approval if 1 worker is dismissed?	No
Third-party notification if 9 workers are dismissed?	Yes
Third-party approval if 9 workers are dismissed?	No
Retraining or reassignment obligation before redundancy?	No
Priority rules for redundancies?	No
Priority rules for reemployment?	Yes

Source: *Doing Business* database.

EMPLOYING WORKERS

Redundancy cost

The redundancy cost indicator measures the cost of advance notice requirements, severance payments and penalties due when terminating a redundant worker, expressed in weeks of salary. The average value of

notice requirements and severance payments applicable to a worker with 1 year of tenure, a worker with 5 years and a worker with 10 years is used to assign the score.

Redundancy cost indicator	Data
Notice period for redundancy dismissal (for a worker with 1 year of tenure, in salary weeks)	8.7
Notice period for redundancy dismissal (for a worker with 5 years of tenure, in salary weeks)	17.3
Notice period for redundancy dismissal (for a worker with 10 years of tenure, in salary weeks)	26.0
Notice period for redundancy dismissal (average for workers with 1, 5 and 10 years of tenure, in salary weeks)	17.3
Severance pay for redundancy dismissal (for a worker with 1 year of tenure, in salary weeks)	0.0
Severance pay for redundancy dismissal (for a worker with 5 years of tenure, in salary weeks)	4.3
Severance pay for redundancy dismissal (for a worker with 10 years of tenure, in salary weeks)	8.7
Severance pay for redundancy dismissal (average for workers with 1, 5 and 10 years of tenure, in salary weeks)	4.3

Source: Doing Business database.

DATA NOTES

The indicators presented and analyzed in *Doing Business* measure business regulation and the protection of property rights—and their effect on businesses, especially small and medium-size domestic firms. First, the indicators document the complexity of regulation, such as the number of procedures to start a business or to register and transfer commercial property. Second, they gauge the time and cost of achieving a regulatory goal or complying with regulation, such as the time and cost to enforce a contract, go through bankruptcy or trade across borders. Third, they measure the extent of legal protections of property, for example, the protections of investors against looting by company directors or the range of assets that can be used as collateral according to secured transactions laws. Fourth, a set of indicators documents the tax burden on businesses. Finally, a set of data covers different aspects of employment regulation.

The data for all sets of indicators in *Doing Business 2013* are for June 2012.²

Methodology

The *Doing Business* data are collected in a standardized way. To start, the *Doing Business* team, with academic advisers, designs a questionnaire. The questionnaire uses a simple business case to ensure comparability across economies and over time—with assumptions about the legal form of the business, its size, its location and the nature of its operations. Questionnaires are administered through more than 9,600 local experts, including lawyers, business consultants, accountants, freight forwarders, government officials and other professionals routinely administering or advising on legal and regulatory requirements. These experts have several rounds of interaction with the *Doing Business* team, involving conference calls, written correspondence and visits by the team. For *Doing Business 2013* team members visited 24 economies to verify data and recruit respondents. The data from questionnaires are subjected to numerous rounds of verification, leading to revisions or expansions of the information collected.

² The data for paying taxes refer to January – December 2011.

ECONOMY CHARACTERISTICS

Gross national income per capita

Doing Business 2013 reports 2011 income per capita as published in the World Bank's *World Development Indicators 2012*. Income is calculated using the Atlas method (current US\$). For cost indicators expressed as a percentage of income per capita, 2011 gross national income (GNI) in U.S. dollars is used as the denominator. GNI data were not available from the World Bank for Afghanistan; Australia; The Bahamas; Bahrain; Barbados; Brunei Darussalam; Cyprus; Djibouti; Guyana; the Islamic Republic of Iran; Kuwait; Malta; New Zealand; Oman; Puerto Rico (territory of the United States); Sudan; Suriname; the Syrian Arab Republic; Timor-Leste; West Bank and Gaza; and the Republic of Yemen. In these cases GDP or GNP per capita data and growth rates from the International Monetary Fund's World Economic Outlook database and the Economist Intelligence Unit were used.

Region and income group

Doing Business uses the World Bank regional and income group classifications, available at <http://data.worldbank.org/about/country-classifications>. The World Bank does not assign regional classifications to high-income economies. For the purpose of the *Doing Business* report, high-income OECD economies are assigned the "regional" classification *OECD high income*. Figures and tables presenting regional averages include economies from all income groups (low, lower middle, upper middle and high income).

Population

Doing Business 2013 reports midyear 2011 population statistics as published in *World Development Indicators 2012*.

The *Doing Business* methodology offers several advantages. It is transparent, using factual information about what laws and regulations say and allowing multiple interactions with local respondents to clarify potential misinterpretations of questions. Having

representative samples of respondents is not an issue; *Doing Business* is not a statistical survey, and the texts of the relevant laws and regulations are collected and answers checked for accuracy. The methodology is inexpensive and easily replicable, so data can be collected in a large sample of economies. Because standard assumptions are used in the data collection, comparisons and benchmarks are valid across economies. Finally, the data not only highlight the extent of specific regulatory obstacles to business but also identify their source and point to what might be reformed.

Information on the methodology for each *Doing Business* topic can be found on the *Doing Business* website at <http://www.doingbusiness.org/methodology/>.

Limits to what is measured

The *Doing Business* methodology has 5 limitations that should be considered when interpreting the data. First, the collected data refer to businesses in the economy's largest business city (which in some economies differs from the capital) and may not be representative of regulation in other parts of the economy. To address this limitation, subnational *Doing Business* indicators were created (see the section on subnational *Doing Business* indicators). Second, the data often focus on a specific business form—generally a limited liability company (or its legal equivalent) of a specified size—and may not be representative of the regulation on other businesses, for example, sole proprietorships. Third, transactions described in a standardized case scenario refer to a specific set of issues and may not represent the full set of issues a business encounters. Fourth, the measures of time involve an element of judgment by the expert respondents. When sources indicate different estimates, the time indicators reported in *Doing Business* represent the median values of several responses given under the assumptions of the standardized case.

Finally, the methodology assumes that a business has full information on what is required and does not waste time when completing procedures. In practice, completing a procedure may take longer if the business lacks information or is unable to follow up promptly. Alternatively, the business may choose to disregard some burdensome procedures. For both reasons the time delays reported in *Doing Business*

2013 would differ from the recollection of entrepreneurs reported in the World Bank Enterprise Surveys or other perception surveys.

Subnational *Doing Business* indicators

This year *Doing Business* completed subnational studies for Indonesia, Kenya, Mexico, the Russian Federation and the United Arab Emirates. Each of these countries had already asked to have subnational data in the past, and this year *Doing Business* updated the indicators, measured improvements over time and expanded geographic coverage to additional cities or added additional indicators. *Doing Business* also published regional studies for the Arab world, the East African Community and member states of the Organization for the Harmonization of Business Law in Africa (OHADA).

The subnational studies point to differences in business regulation and its implementation—as well as in the pace of regulatory reform—across cities in the same economy. For several economies subnational studies are now periodically updated to measure change over time or to expand geographic coverage to additional cities. This year that is the case for all the subnational studies published.

Changes in what is measured

The ranking methodology for paying taxes was updated this year. The threshold for the total tax rate introduced last year for the purpose of calculating the ranking on the ease of paying taxes was updated. All economies with a total tax rate below the threshold (which is calculated and adjusted on a yearly basis) receive the same ranking on the total tax rate indicator. The threshold is not based on any economic theory of an "optimal tax rate" that minimizes distortions or maximizes efficiency in the tax system of an economy overall. Instead, it is mainly empirical in nature, set at the lower end of the distribution of tax rates levied on medium-size enterprises in the manufacturing sector as observed through the paying taxes indicators. This reduces the bias in the indicators toward economies that do not need to levy significant taxes on companies like the *Doing Business* standardized case study company because they raise public revenue in other ways—for example, through

taxes on foreign companies, through taxes on sectors other than manufacturing or from natural resources (all of which are outside the scope of the methodology). Giving the same ranking to all economies whose total tax rate is below the threshold avoids awarding economies in the scoring for having an unusually low total tax rate, often for reasons unrelated to government policies toward enterprises. For example, economies that are very small or that are rich in natural resources do not need to levy broad-based taxes.

Data challenges and revisions

Most laws and regulations underlying the *Doing Business* data are available on the *Doing Business* website at <http://www.doingbusiness.org>. All the sample questionnaires and the details underlying the indicators are also published on the website. Questions on the methodology and challenges to data can be submitted through the website's "Ask a Question" function at <http://www.doingbusiness.org>.

Ease of doing business and distance to frontier

Doing Business 2013 presents results for 2 aggregate measures: the aggregate ranking on the ease of doing business and the distance to frontier measure. The ease of doing business ranking compares economies with one another, while the distance to frontier measure benchmarks economies to the frontier in regulatory practice, measuring the absolute distance to the best performance on each indicator. Both measures can be used for comparisons over time. When compared across years, the distance to frontier measure shows how much the regulatory environment for local entrepreneurs in each economy has changed over time in absolute terms, while the ease of doing business ranking can show only relative change.

Ease of doing business

The ease of doing business index ranks economies from 1 to 185. For each economy the ranking is calculated as the simple average of the percentile rankings on each of the 10 topics included in the index in *Doing Business 2013*: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting

investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency. The employing workers indicators are not included in this year's aggregate ease of doing business ranking. In addition to this year's ranking, *Doing Business* presents a comparable ranking for the previous year, adjusted for any changes in methodology as well as additions of economies or topics.³

Construction of the ease of doing business index

Here is one example of how the ease of doing business index is constructed. In Finland it takes 3 procedures, 14 days and 4% of annual income per capita in fees to register a property. On these 3 indicators Finland ranks in the 6th, 16th and 39th percentiles. So on average Finland ranks in the 20th percentile on the ease of registering property. It ranks in the 30th percentile on starting a business, 28th percentile on getting credit, 24th percentile on paying taxes, 13th percentile on enforcing contracts, 5th percentile on trading across borders and so on. Higher rankings indicate simpler regulation and stronger protection of property rights. The simple average of Finland's percentile rankings on all topics is 21st. When all economies are ordered by their average percentile rankings, Finland stands at 11 in the aggregate ranking on the ease of doing business.

More complex aggregation methods—such as principal components and unobserved components—yield a ranking nearly identical to the simple average used by *Doing Business*.⁴ Thus, *Doing Business* uses the simplest method: weighting all topics equally and,

³ In case of revisions to the methodology or corrections to the underlying data, the data are back-calculated to provide a comparable time series since the year the relevant economy or topic was first included in the data set. The time series is available on the *Doing Business* website (<http://www.doingbusiness.org>). Six topics and more than 50 economies have been added since the inception of the project. Earlier rankings on the ease of doing business are therefore not comparable.

⁴ See Simeon Djankov, Darshini Manraj, Caralee McLiesh and Rita Ramalho, "Doing Business Indicators: Why Aggregate, and How to Do It" (World Bank, Washington, DC, 2005). Principal components and unobserved components methods yield a ranking nearly identical to that from the simple average method because both these methods assign roughly equal weights to the topics, since the pairwise correlations among indicators do not differ much. An alternative to the simple average method is to give different weights to the topics, depending on which are considered of more or less importance in the context of a specific economy.

within each topic, giving equal weight to each of the topic components.⁵

If an economy has no laws or regulations covering a specific area—for example, insolvency—it receives a “no practice” mark. Similarly, an economy receives a “no practice” or “not possible” mark if regulation exists but is never used in practice or if a competing regulation prohibits such practice. Either way, a “no practice” mark puts the economy at the bottom of the ranking on the relevant indicator.

The ease of doing business index is limited in scope. It does not account for an economy’s proximity to large markets, the quality of its infrastructure services (other than services related to trading across borders and getting electricity), the strength of its financial system, the security of property from theft and looting, macroeconomic conditions or the strength of underlying institutions.

Variability of economies’ rankings across topics

Each indicator set measures a different aspect of the business regulatory environment. The rankings of an economy can vary, sometimes significantly, across indicator sets. The average correlation coefficient between the 10 indicator sets included in the aggregate ranking is 0.37, and the coefficients between any 2 sets of indicators range from 0.19 (between dealing with construction permits and getting credit) to 0.60 (between starting a business and protecting investors). These correlations suggest that economies rarely score universally well or universally badly on the indicators.

Consider the example of Canada. It stands at 17 in the aggregate ranking on the ease of doing business. Its ranking is 3 on starting a business, and 4 on both resolving insolvency and protecting investors. But its ranking is only 62 on enforcing contracts, 69 on dealing with construction permits and 152 on getting electricity.

Variation in performance across the indicator sets is not at all unusual. It reflects differences in the degree of priority that government authorities give to particular areas of business regulation reform and the

ability of different government agencies to deliver tangible results in their area of responsibility.

Economies that improved the most across 3 or more Doing Business topics in 2011/12

Doing Business 2013 uses a simple method to calculate which economies improved the most in the ease of doing business. First, it selects the economies that in 2011/12 implemented regulatory reforms making it easier to do business in 3 or more of the 10 topics included in this year’s ease of doing business ranking.⁶ Twenty-three economies meet this criterion: Benin, Burundi, Costa Rica, the Czech Republic, Georgia, Greece, Guinea, Kazakhstan, Korea, the Lao People’s Democratic Republic, Liberia, Mongolia, the Netherlands, Panama, Poland, Portugal, Serbia, the Slovak Republic, Slovenia, Sri Lanka, Ukraine, the United Arab Emirates and Uzbekistan. Second, *Doing Business* ranks these economies on the increase in their ranking on the ease of doing business from the previous year using comparable rankings.

Selecting the economies that implemented regulatory reforms in at least 3 topics and improved the most in the aggregate ranking is intended to highlight economies with ongoing, broad-based reform programs.

Distance to frontier measure

A drawback of the ease of doing business ranking is that it can measure the regulatory performance of economies only relative to the performance of others. It does not provide information on how the absolute quality of the regulatory environment is improving over time. Nor does it provide information on how large the gaps are between economies at a single point in time.

The distance to frontier measure is designed to address both shortcomings, complementing the ease of doing business ranking. This measure illustrates the distance of an economy to the “frontier,” and the change in the measure over time shows the extent to which the economy has closed this gap. The frontier is a score derived from the most efficient practice or highest score achieved on each of the component indicators in 9 *Doing Business* indicator sets (excluding

⁵ A technical note on the different aggregation and weighting methods is available on the *Doing Business* website (<http://www.doingbusiness.org>).

⁶ *Doing Business* reforms making it more difficult to do business are subtracted from the total number of those making it easier to do business.

the employing workers and getting electricity indicators) by any economy since 2005. In starting a business, for example, New Zealand has achieved the highest performance on the time (1 day), Canada and New Zealand on the number of procedures required (1), Slovenia on the cost (0% of income per capita) and Australia and 90 other economies on the paid-in minimum capital requirement (0% of income per capita). Calculating the distance to frontier for each economy involves 2 main steps. First, individual indicator scores are normalized to a common unit: except for the total tax rate. To do so, each of the 28 component indicators y is rescaled to $(\max - y)/(\max - \min)$, with the minimum value (min) representing the frontier—the highest performance on that indicator across all economies since 2005. For the total tax rate, consistent with the calculation of the rankings, the frontier is defined as the total tax rate corresponding to the 15th percentile based on the overall distribution of total tax rates for all years. Second, for each economy the scores obtained for individual indicators are aggregated through simple averaging into one distance to frontier score. An economy's distance to frontier is indicated on a scale from 0 to 100, where 0 represents the lowest performance and 100 the frontier.

The difference between an economy's distance to frontier score in 2005 and its score in 2012 illustrates the extent to which the economy has closed the gap to the frontier over time. And in any given year the score measures how far an economy is from the highest performance at that time.

The maximum (max) and minimum (min) observed values are computed for the 174 economies included in the *Doing Business* sample since 2005 and for all years (from 2005 to 2012). The year 2005 was chosen as the baseline for the economy sample because it was the first year in which data were available for the majority of economies (a total of 174) and for all 9 indicator sets included in the measure. To mitigate the effects of extreme outliers in the distributions of the rescaled data (very few economies need 694 days to complete the procedures to start a business, but many need 9 days), the maximum (max) is defined as the 95th percentile of the pooled data for all economies and all years for each indicator. The exceptions are the getting credit, protecting investors and resolving insolvency indicators, whose construction precludes outliers.

Take Ghana, which has a score of 67 on the distance to frontier measure for 2012. This score indicates that the economy is 33 percentage points away from the frontier constructed from the best performances across all economies and all years. Ghana was further from the frontier in 2005, with a score of 54. The difference between the scores shows an improvement over time.

The distance to frontier measure can also be used for comparisons across economies in the same year, complementing the ease of doing business ranking. For example, Ghana stands at 64 this year in the ease of doing business ranking, while Peru, which is 29 percentage points from the frontier, stands at 43.

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