Annex 1: Data and scoring methodology

Data gathering and standardized case study

The CTC data about foreign exchange laws, regulations, and practice relevant for FDI were gathered through a standard questionnaire issued to foreign exchange and investment experts in 98 economies, including lawyers, accountants, and central bankers. The questionnaire was distributed in late 2011, with responses received through early 2012.

The questionnaire was based on a standardized case study so that responses can be comparable across economies. The case study asked about the laws and practices that would affect a locally registered subsidiary of a multinational firm with the following characteristics:

- Has an initial capital investment of US$ 10 million, including equity financing of US$ 5 million on which dividend payments will be made and a foreign loan of US$ 5 million from an international commercial bank on which interest and principal payments will be made.
- Manufactures basic consumer products to be exported and sold domestically, and imports goods and services for production purposes.
- Properly declares its profits and pays all applicable taxes.
- Is not operating in a special economic zone or benefitting from any non-automatic incentives.

The responses were reviewed and harmonized and supplemented with desk research, especially of national foreign exchange laws and regulations and the Annual Report on Exchange Arrangements and Exchange Restrictions published by the International Monetary Fund.

Identification and classification of restrictions

For each type of transaction covered by CTC, the analysis identified whether a restriction exists by law or in practice, on either the conversion of local currency and foreign exchange or the transfer of funds across borders. *De jure* restrictions were identified when a law or regulation limits the free conversion or transfer of funds for the transaction. *De facto* restrictions were identified when respondents noted that a transaction is limited in practice but not by law, such as if commercial banks request central bank approval before making a certain transfer abroad even if not legally required to do so. *De facto* restrictions were also identified via certain questions about the amount of time required to complete a transaction or receive a government approval.

Given CTC's objective of measuring foreign exchange regulations relevant for FDI, CTC identifies restrictions on the conversion or transfer of funds related to a given transaction, as opposed to restrictions on the underlying transaction itself. For example, approval requirements to undertake a FDI project are not considered in the analysis; but approval requirements to receive a transfer of FDI capital would be scored as a restriction. Some approval requirements related to importing certain goods and services are also not considered, but approval requirements to pay for allowed imports are scored as restrictions. One exception is that restrictions related to receiving a foreign loan are considered in the analysis. The ability to borrow in foreign currency from abroad is an important aspect of the foreign exchange regime affecting how an investor can finance a FDI project, and so approval requirements and other restrictions on receiving a foreign loan are scored in the CTC indicators.

Based on the restrictions identified, each transaction is classified into one of five types: unrestricted; administrative requirements related to the transaction; and then moderate, heavy, or extreme restrictions. Figure 1 of Section 3 above provides an overview of these classifications, and Tables 1, 2, and 3 below detail how specific restrictions on a given transaction or operation are classified.

The administrative requirements classification merits elaboration. A set of restrictions was identified that are procedural in nature, and do not involve government interaction, such as requiring that specific documentation be presented to commercial banks to justify certain transactions. Such requirements could be efficient and appropriate monitoring mechanisms; or they could be implemented bureaucratically and create risk that excessive compliance checks will delay transactions. The administrative requirement classification was established to differentiate such requirements from transactions that are fully unrestricted, or that use risk-based monitoring mechanisms. But such requirements are also differentiated from moderate restrictions. Moderate restrictions are identified when government authorization or certification is required, or when a timing or quantitative limit is placed on a transaction. Administrative requirements do not require government response or limit how or when a transaction may be conducted, and so receive this intermediate classification.

A numerical score was then assigned for each transaction based on its classification. If multiple restrictions were identified for a given transaction or operation, the more restrictive classification is assigned. In some instances, respondents noted a difference between legal restrictions and those implemented in practice. In such cases, the score assigned is based on the more restrictive of the *de jure* or *de facto* requirements, to capture either the actual degree of restrictiveness experienced by foreign investor or the degree of restrictiveness that could be legally applied to a transaction.

For some operations, additional data were gathered regarding how long it takes to complete the transaction or receive approval from the government. An additional deduction of 10 points is applied to the score for that transaction when data indicate that the amount of time exceeds certain thresholds: one week for cross-border payments; two weeks for approval to open a foreign exchange bank account; and three weeks for approval to receive a long-term foreign loan.

TABLE 1: Scoring overview for indicators #1, #2, and #3 on restrictions to cross-border transactions

Conversion/transfer restriction type	Examples of specific restrictions	Score
Unrestricted	• No restrictions at all, or notification for statistical purposes • Documentation requirements following best practices only to show the funds being transferred are for a legal/valid transaction	100
Administrative requirements	• Documentation required for all transactions or to show that the transfer is allowed per the exchange regulations • Transaction must be conducted through a formal exchange market, or through a specific type of bank account, or registered before transfer	75
Moderate restrictions	• Government authorization required, but with a rules-based mechanism in place, or authorization is given for all bona fide requests • Timing restrictions on the transaction, such as advanced payment limitations, or on the purchase of foreign exchange • Pricing restrictions or quantitative limits on the transfer or payment • Specific government certification related to the underlying transaction or of tax compliance required to make the payment	50
Heavy restrictions	• Approval is required, with no rules-based mechanism to remove discretion or no indication that all legitimate requests are granted	25
Extreme restrictions	• The transfer or payment is not allowed, or does not occur in practice due to excessive regulations	0

TABLE 2: Scoring overview for indicator #4, export proceeds component

Restriction type	Examples of specific restrictions	Score
Unrestricted	• No repatriation or surrender requirement (and foreign bank accounts are allowed without restriction on export proceeds)	100
Administrative requirements	• Export proceeds must be kept in specific types of bank accounts or comply with other procedural requirements	75
Moderate restrictions	• Repatriate some or all export proceeds, no surrender required (and no restrictions on local foreign exchange bank accounts) • No repatriation requirements, but foreign bank accounts are restricted	50
Heavy restrictions	• Repatriate all, surrender some of the export proceeds • Repatriate all, and approval is required to hold local foreign exchange bank accounts • Foreign exchange does not need to be surrendered only if used for specific transactions	25
Extreme restrictions	• Repatriate all, and surrender all	0

TABLE 3: Scoring overview for indicator #4, foreign exchange bank accounts component

Restriction type	Examples of specific restrictions	Score
Unrestricted	• No restrictions at all • Reporting/notification for statistical or tax registration purposes	100
Administrative requirements	• Documentation of international transactions, or certification that the firm is an exporter, in order for commercial banks to open foreign exchange accounts • Accounts must be formally established or registered as a certain type of account for some transactions to be processed legally	75
Moderate restrictions	• Approval is required, but all bona fide requests are granted • There are limits on holding foreign exchange in the account that was purchased through the domestic exchange market	50
Heavy restrictions	• Approval is required, and there is no indication that all bona fide requests are granted • Foreign exchange accounts are allowed, but only for some restricted transactions or up to a quantitative limit	25
Extreme restrictions	• Foreign exchange bank accounts are not allowed	0

Scoring and indicator development

Once each transaction or operation is classified and scored, the four CTC indicator scores are calculated. The indicator scores are an average of the scores of each transaction or operation constituting the indicator (or an average of the scores of groupings of transactions, as with the two current payments in Indicator #2 and the two types of foreign exchange bank accounts in Indicator #4). The specific indicators and their components follow:

Indicator #1: Receiving investment inflows, covering restrictions on:

- Inflows of foreign equity capital (50% of the indicator score)
- Inflows of long-term foreign loans, including the average reported time required to obtain approval to receive a long-term foreign loan, if applicable (50% of the indicator score)

Indicator #2: Repatriating investments and income, covering restrictions on:

- Repatriating liquidated capital and capital gains (50% of the indicator score)
- Making dividend payments abroad, including the average reported time required to convert and transfer currency abroad to make the payment (25% of the indicator score)
- Making repayments of foreign loan principal and interest, including the average reported time required to convert and transfer currency abroad to make the payment (25% of the indicator score)

Indicator #3: Making payments abroad, covering restrictions on:

- Paying for imported goods (25% of the indicator score)
- Paying for imported services (25% of the indicator score)
- Paying for international travel (25% of the indicator score)
- Making personal payments or transferring wages abroad (25% of the indicator score)

Indicator #4: Holding foreign exchange, covering:

- Whether a firm can hold domestic foreign exchange bank accounts, including the average reported time required to obtain approval to open the account, if applicable (25% of the indicator score)
- Whether a firm can hold offshore foreign exchange bank accounts, including the average reported time required to obtain approval to open the account, if applicable (25% of the indicator score)
- Whether export proceeds must be repatriated and surrendered (50% of the indicator score)

The four indicator scores are also agglomerated into one average score per economy, using a simple average of the four scores, as reported in Figure 2. The purpose of the average score per economy is to describe the average degree of restrictiveness across transactions in a comparable way and to enable quantitative analysis of the CTC data. As noted earlier in Section 3 of the report, the scores are not designed to rank economies, and a higher score does not necessarily reflect a better overall policy environment. The average indicator score was associated with a corresponding degree of average restrictiveness at the economy level using the following criteria:

- Unrestricted = average indicator score of 87.5 or higher
- Administrative requirements = average indicator score between 62.5 and 87.5
- Moderate restrictions = average indicator score between 37.5 and 62.5
- Heavy restrictions = average indicator score between 12.5 and 37.5

Economies would be classified as having extreme restrictions if the average score were less than 12.5, but no such economies were identified in the current sample.

Subsequent updates to the CTC data would identify changes in the restrictions applied to a given transaction, leading to re-classification and revised indicator scores that would capture reforms to the foreign exchange regime over time.