CTF-SCF/TFC.9/9 Enterprise Risk Management Framework Report for the Climate Investment Funds

November 2012





## Enterprise Risk Management Framework is...

## Process

- Applied across the partnership
- Designed to:
  - Identify potential events and risks that may affect the CIF
  - Make risk-informed decisions
  - Manage the risks within the CIF's risk tolerances
  - Provide reasonable assurances regarding the achievement of CIF's financial and strategic objectives

The CIF ERM process includes leveraging MDB, CIF Administrative Unit and Trustee processes to effectively and efficiently administer and utilize the CIF funds



## The CIF ERM Framework enables...

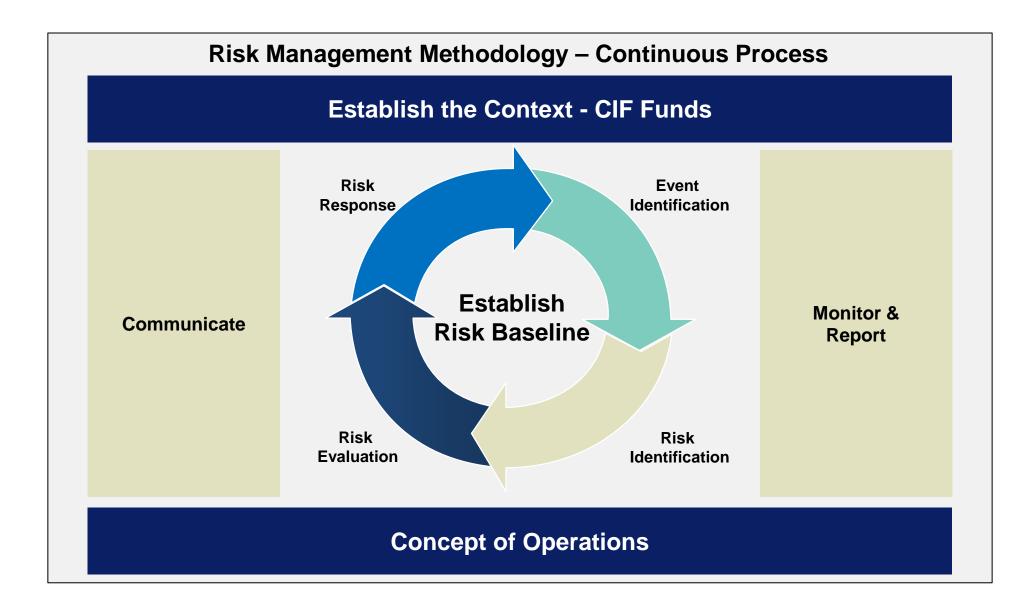
## TFCs

- Risk informed financial, strategic and operational decisions
- Portfolio view of risks
- Decisions aligned with the CIF's objectives and risk tolerances

### MDBs, Trustee & CIF Administrative Unit

- Communicate in a more transparent and effective manner
- Develop proactive mitigation to potential future events
- Establish risk triggers
- Provide reasonable assurance
- Evaluate relevant information







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## **CIF ERM Framework: Process consisting of four steps**

| Step       | Establish<br>Context  | Communicate   | > E  | Monitor &<br>Report   |   |  |
|------------|---|---|--|---|---|--|
| Process    | Establish ERM<br>Environment  | Establish<br>Communication<br>Program   | Identify Events &<br>Potential Risks   | Evaluate Risks  | Determine Risk<br>Response<br>Strategies  | Track &<br>Communicate<br>Progress   |
| Components | Define risk management<br>goals and objectives<br>informed by the TFCs'<br>strategic vision<br>• Objectives<br>• Risk tolerance levels<br>• Constraints<br><b>Determine governance</b><br>model<br>• Risk management<br>philosophy<br>• Commitment to<br>ethical values<br>• TFC oversight<br>• ERM working group<br>• Organizational structure<br>• Roles, responsibilities<br>• Decision-making authority | Establish common language<br>Communicate risk<br>governance model<br>• Risk management<br>philosophy<br>• TFC oversight<br>• ERM working group<br>• Organizational structure<br>• Roles, responsibilities<br>• Decision-making authority<br>Communicate ERM<br>risk policies<br>• Strategic, tactical, quality plans<br>• Risk management architecture<br>Support and communicate<br>proper flow of relevant<br>project information<br>Communicate future<br>monitoring & reporting | Evaluate external<br>environment to identify<br>external events<br>Evaluate business<br>processes and identify<br>relevant events<br>Identify inherent risks for<br>each event<br>Classify risk by area and<br>risk dimensions categories<br>Determine current<br>management response<br>Record remaining<br>residual risk | Evaluate probability of<br>occurrence<br>Evaluate impact<br>Determine priority<br>Identify Key Risk<br>Indicators (KRI)<br>Establish triggers and<br>tolerance levels | Determine an appropriate<br>response category<br>• Terminate<br>• Treat<br>• Accept<br>• Transfer<br>Determine additional<br>risk response<br>Determine risk owner<br>Evaluate portfolio impact<br>Index the risk to all<br>relevant events | Generate portfolio<br>view reportsIdentify degree to which<br>business objectives are<br>being metCollect, graph, and<br>analyze performance<br>and financial dataContinuously inform<br>TFC decisionsRecord experiences,<br>Barriers and aids in<br>implementationIncorporate lessons<br>learnedReinforce/reward adherence<br>to new controls |
| Product    | Risk Governance &<br>Policies   | Communication<br>Plan   | Preliminary Risk<br>Register   | Prioritized Risk<br>Register  | Baseline Risk<br>Register   | Portfolio Review   |

Initial Analysis Completed / Business Decisions Required to Complete



## **Establish context**

**Establish** Context Establish ERM Environment **Define risk management** goals and objectives informed by the TFCs' strategic vision Objectives Risk tolerance levels Constraints **Determine governance** model Risk management philosophy Commitment to ethical values TFC oversight • ERM working group Organizational structure · Roles, responsibilities Decision-making authority **Revise relevant policies Risk Governance & Policies** 

## Completed

 Defined ERM objectives

- Created common language
- Identified constraints
- Defined working group
- Defined Concept of Operations

## Findings

- Clear Fund objectives
- Varied ERM objectives
- Established governance structure
- Clear operational structure
- Varied tolerance levels



Product

Step

Process

Components

## Communicate

Process Step

Establish Communication Program

Communicate

Establish common language

Communicate risk governance model

- Risk management philosophy
- TFC oversight

• ERM working group

- Organizational structure
- Roles, responsibilities
- Decision-making authority

### Communicate ERM risk policies

- Strategic, tactical, quality plans
- Risk management architecture

Support and communicate proper flow of relevant project information

Communicate future monitoring and reporting process

Product

Components

Communication Plan

## Communicated

- ERM objectives
- Portfolio reporting
- Transparency needs
- Common ERM language
- MDB overall constraints
- Working group roles
- Concept of Operations

## Findings

- Reporting:
  - Structures exists
  - Not integrated
  - Inconsistent
- MDBs reporting concerns
- Varied understanding of ERM
- Varied understanding of benefits



## **Establish risk baseline**

| de                      | E   | stablish Risk Baseli  | ne  |   |
|-------------------------|---|---|---|---|
| Components Process Step | L<br>Identify Events &<br>Potential Risks<br>Evaluate external<br>environment to identify<br>external events<br>Evaluate business<br>processes and identify<br>relevant events<br>Identify inherent risks for<br>each event<br>Classify risk by area and<br>risk dimensions categories<br>Determine current<br>management response<br>Record remaining<br>residual risk | Evaluate Risks<br>Evaluate probability of<br>occurrence<br>Evaluate impact<br>Determine priority<br>Identify Key Risk<br>Indicators (KRI)<br>Establish triggers | Determine Risk<br>Response<br>Strategies<br>Determine an appropriate<br>response category<br>• Terminate<br>• Treat<br>• Accept<br>• Transfer<br>Determine additional<br>risk response<br>Determine risk owner<br>Evaluate portfolio impact<br>Index the risk to all<br>relevant events | <ul> <li>Evaluated events &gt; KRIs and<br/>triggers</li> <li>Identified<br/>inherent risks &gt; Additional<br/>response</li> <li>Identified current<br/>response &gt; Risk owner</li> <li>Remaining risks &gt; Portfolio impact</li> <li>Probability &gt; Indexed</li> </ul> |
| Product                 | Preliminary Risk<br>Register  | Prioritized Risk<br>Register  | Baseline Risk<br>Register   |   |
|                         |   |   |   |   |

**Initial Baseline Risk Register** 



## **Risk register structure**

|                                | Risk Identification   |
|--------------------------------|---|
| Event                          | Implementation and Supervision  |
| Risk Area                      | Financial   |
| Risk Dimension                 | Private Sector Project Credit   |
| Inherent Risk                  | Private sector borrowers credit rating<br>decreases and the possibility of default<br>increases |
| Risk Name                      | Private sector credit   |
| Current Management<br>Response | MDBs track credit rating but do not report to TFC   |
| Remaining Residual<br>Risk     | Private sector credit ratings are not aggregated at the portfolio level                         |

| Risk Response                         |   |  |  |  |  |  |  |
|---------------------------------------|---|--|--|--|--|--|--|
| Risk Response Category                | Treated   |  |  |  |  |  |  |
| Additional<br>Recommended<br>Response | Aggregate credit ratings at the portfolio level |  |  |  |  |  |  |
| Owner                                 | TFC   |  |  |  |  |  |  |
| Portfolio Impact                      | High  |  |  |  |  |  |  |

|                                | Et a  |
|--------------------------------|---|
|                                | Risk Evaluation   |
| Probability                    | High  |
| Impact                         | High  |
| Priority                       | High  |
| Key Risk<br>Indicator<br>(KRI) | 1) Credit Rating<br>2) Credit Outlook   |
| Trigger                        | <ol> <li>Credit ratings:<br/>Low: XXX- and higher<br/>Medium: XX+<br/>Sustainable: XX<br/>High: XX-<br/>Justification: the portfolio as of June 2011 was rated<br/>XXX-</li> <li>Credit Outlook:<br/>Low: less than 10% of the portfolio has a negative<br/>outlook<br/>Medium: 10% - 14.99% of the portfolio has a negative<br/>outlook<br/>Sustainable: 15%-19.99% of the portfolio has a negative<br/>outlook<br/>High: more than 20% of the portfolio has a negative<br/>outlook</li> </ol> |

**Note**: The example above illustrates risk register structure. All confidential items will be addressed by and are subject to the approval of the working group.



## **Monitor and Report**

Monitor & Step Report Process Track & Communicate Progress **Generate portfolio** view reports Identify degree to which business objectives are being met Collect, graph, and analyze performance Components and financial data **Continuously inform TFC decisions Record experiences**, Barriers and aids in implementation **Incorporate lessons** learned **Reinforce/reward adherence** to new controls Product Portfolio Review

Establish portfolio views

Inform TFC

- Allows early warning
- Integrate with Results Framework
- Leverage MDB, Trustee and CIF Administration current processes
- Need to embed risk responses



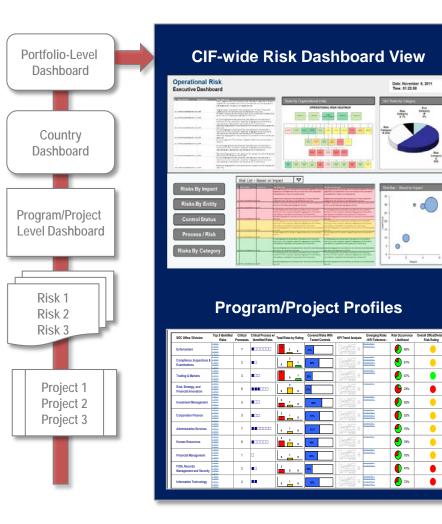
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## **CIF-wide Risk** Dashboard

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# Establishing an ERM Program working group

### Why?

- Best practice
- Represent
   business
- Make business decisions to move forward

#### What?

- Finalize context
- Select risks
- Finalize communication
- Finalize risk baseline
- Develop monitoring and reporting

### Who?

#### • TFC:

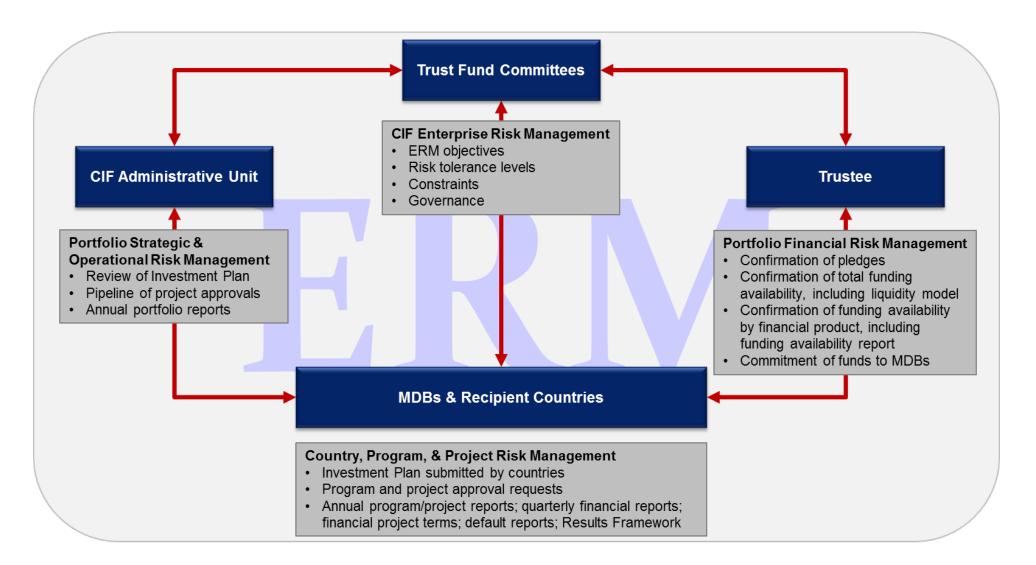
- ✓ Select risks
- ✓ Tolerances
- Working group
  - ✓ Trustee
  - ✓ CIF Admin
  - ✓ MDBs
  - ✓ ERM expert

#### How?

- Iterative approach
- Report to TFCs at joint meetings



## **Concept of Operations**





## The way forward



CIF ERM nplementation Pla





## Review Example Risk Register





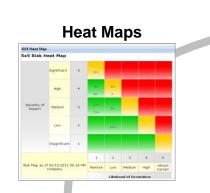
## Sample Scorecards and Risk Reports





### The ERM software suites analyzed all contain a medley of process steps and visualization options to support the risk management process

**Internal & External Events** 



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#### **Risk & Control Documentation**

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#### **Key Risk Indicators**



#### **Reporting & Management**



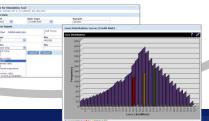
#### **Risk Assessment**

| Audit Checklist  |                 |   |              |                 |                |            |
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#### **Risk Mitigation & Action Planning**



#### Scenarios Analysis



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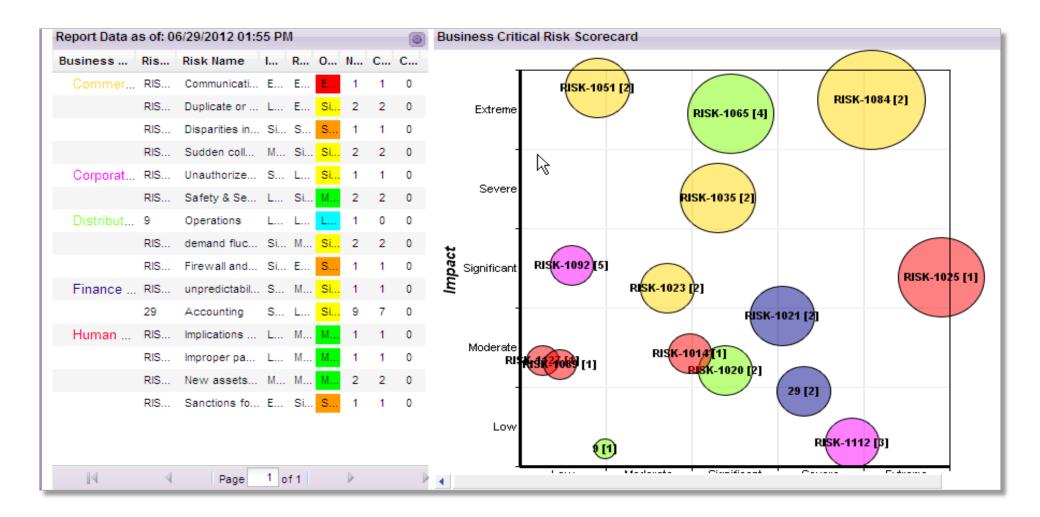


# The ERM tools offer scenario analysis and scoring capabilities via a variety of available data input options

|   |                        | Process1         | Process2                      | Process3              |                      |              |               |        | Process1 | Process2 | Process |
|---|------------------------|------------------|-------------------------------|-----------------------|----------------------|--------------|---------------|--------|----------|----------|---------|
| Accounting Poli                                     | icy Risk               | н                | м                             | н                     |                      | Accounti     | ng Policy Ris | k      | L        | м        | L       |
| Asset Servicing                                     | Risk                   | м                | м                             | L                     |                      | Asset Ser    | vicing Risk   |        | м        | м        | L       |
| 7   | Total Score            | н                | м                             | M                     |                      |              | Total S       | core   | м        | м        | L       |
|   |                        |                  |                               |                       |                      |              |               |        |          | •        |         |
| Functional  | 1:4                    |                  |                               |                       |                      | Process1     | Process2      | Pitc   | ess3     |          |         |
| Functional     Assess indiv                         | -                      | f risks          |                               |                       | Access Control Risk  | ?            | ?             | ?      |          |          |         |
| <ul> <li>Arrive at tota</li> </ul>                  | al scores ind          | ependentl        |                               |                       | Asset Servicing Risk | ?            | ?             | ?      |          |          |         |
| <ul> <li>Use the sco</li> <li>Compare ea</li> </ul> |                        |                  |                               |                       | Security Risk        | ?            | ?             | 2      |          |          |         |
|   |                        |                  |                               |                       | Total Score          | ,            | ?             |        | lon -    |          |         |
|   |                        |                  |                               |                       |                      |              | f             |        |          |          |         |
| Manage Scenarios                                    |                        |                  |                               |                       |                      |              |               |        | Sul-     |          |         |
| Delete Add Row                                      | Delete Last Row        | Total Rows       | 8 Pages 2                     | 2                     |                      |              |               |        |          |          |         |
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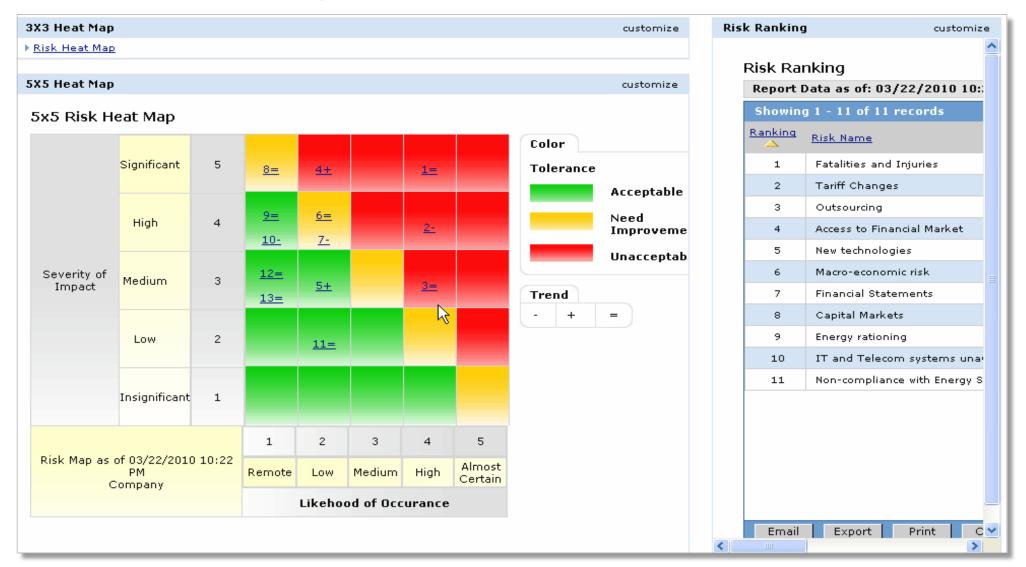


# The ERM tools offer robust, informative dashboards such as the business critical risk scorecard and the risk bubble charts displayed below





# The outputs of ERM user interfaces include visuals such as heat maps and scorecards to assess, prioritize, and monitor risks





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# Additional examples of user interface and scorecards available through the ERM vendors researched

| Update Ris  | k              |                                    |        |            |                 |       |                           |          |         |               | KA           | IROS×       |
|-------------|----------------|------------------------------------|--------|------------|-----------------|-------|---------------------------|----------|---------|---------------|--------------|-------------|
|             |                | ng or untime<br>ceipt of documents | ely r  | eceipt (   | of docume       | nt    | s                         |          |         |               | <b>∕ ∕ ∕</b> | nethodware. |
| Risk Owner  |                | Bob Adderley                       |        |            | •               | •     |                           |          |         |               |              |             |
| Risk Status |                | Stable                             |        |            | •               | -     |                           |          |         |               |              |             |
| Next Review |                | 23/09/2010                         |        |            | 15              | 5     |                           |          |         |               |              |             |
|             |                |                                    |        |            |                 |       |                           |          |         |               |              |             |
|             | Co             | nsequence                          |        | Likelihood | I               | F     | Risk Score                | Se       | everity |               |              |             |
| Absolute    | M              | ajor                               | •      | Likely     | •               | ·     | 16                        | High     |         |               |              |             |
| Controlled  | M              | ajor                               | •      | Possible   | •               |       | 12                        | Moderate |         | rate          |              |             |
| Target      | Ma             | ajor                               | •      | Possible   | •               | ·     | 12                        | Moderate |         | rate          |              |             |
|             |                |                                    |        |            |                 |       |                           |          |         |               |              |             |
| Controls    |                |                                    |        |            |                 |       |                           |          |         | 4             | * 38 🔅       | 29 🕹 🕥 🗖    |
| number      | Name           |                                    |        |            | Description     |       |                           |          |         | Control Owner | Date Create  | đ           |
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| 14          | Identify and i | nvestigate unmatche                | d info | rmation    | Investigate unm | nato  | ched information before d | lue      | date    | Bob Adderley  | 4/03/2009    |             |
| L           |                |                                    |        |            |                 |       |                           |          |         |               |              |             |
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# ERM software suites also feature the functionality to plot key performance indicators

| era<br>KAIROS   |                | R              |               | Reports   Change password   Log Off, riskmanager   Hel<br>8.1.1.<br>Method Walter                         |
|---|----------------|----------------|---------------|---|
| Enterprise Risk KPI/KRI                                   | Operatio       | onal Risk      | Visualization |   |
| TF - Joint Clean Technology Fund                          |                |                |               | ۵ (۱  |
|   |                | 🔹 :            | 🗱 💩 🗢         | Indicator Graph Schild of "Fund Indicators"   |
| Name  | Upper Boundary | Lower Boundary | Bencł         |   |
| % IP Rejected vs. Received                                | 15             | 1              | *             | 25  |
| Green: Within 24 Months from the date of IP endorsement   |                |                |               | 20  |
| Yellow: 25 - 30 Months from the date of IP<br>endorsement |                |                |               | 15  |
| Red: Above 30 Months from the date of IP<br>endorsement   |                |                |               | 10  |
| Allowed Leverage % by Australia                           | 100            | 80             | 95            |   |
| Allowed Leverage % by Germany                             | 100            | 90             | 97            |   |
| Allowed Leverage % by United States                       | 100            | 85             | 95            |   |
|   |                |                |               | Jan 2012 Feb 2012 Mar 2012 Apr 2012 May 2012 Jun 2012 Jul 2012 Aug<br>Period Date                         |
|   |                |                |               | 🖗 Risk List 🕹 🖓 🍪 🔹   |
|   |                |                |               | Name Inherent Risk Magnitude Residual Risk Magnitude Control Effectiveness                                |
| 4   |                |                | -             | Strategic Risk -<br>Performance - Rationale for<br>selected sector or sub-<br>sector for CTF co-financing |

