



Cardano Group Pillar 3 Disclosure September 2018

The pillar 3 disclosure document has been prepared by Cardano Holding Limited for the Cardano UK consolidated group. The document will be reviewed and updated on at least an annual basis.

Background to Cardano

Founded in the Netherlands in 2000, the Cardano Group now has around 230 staff with backgrounds in the areas of risk management, investment management, research, actuarial, pensions covenant advice and investment advisory. Following a successful first seven years during which we became the leaders in the area of risk management in the Netherlands, we launched Cardano in the UK during 2007.

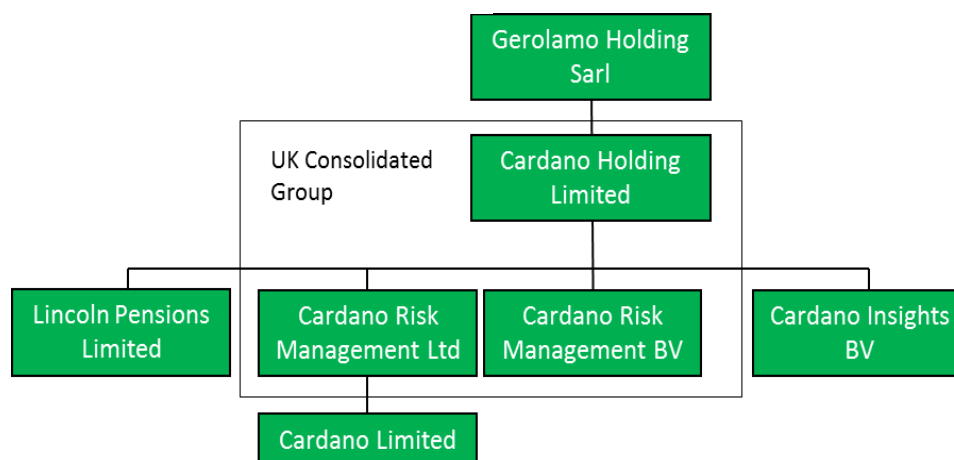
Our core focus is to understand the causes and impact of risk in order to significantly improve financial performance and resilience. We believe that financial institutions, such as pension funds and insurance companies, amongst others, can best serve their members by adopting a robust risk management approach. We help pension funds achieve steady and stable growth in their funding ratio, with no nasty shocks, making them more resilient and better placed to withstand financial crashes.

In the Netherlands, Cardano Risk Management BV is now one of the leading firms in LDI implementation with total client assets under management / advisory of €80bn - €110bn, Cardano has approximately 70 employees in the Netherlands.

The London office offers UK pension funds two forms of services – investment advisory and fiduciary management. The London office also offers other investment management services including liability driven investment management as a component of its broader fiduciary management service. The London business has now grown to over 100 employees and has assets under advice / management of over £50bn, of which £10bn represents clients using fiduciary management.

Regulatory Context

The Cardano Group undertakes regulatory reporting for its regulated entities on a UK consolidated group basis.



Cardano Insights BV is not regulated and has been established to promote financial understanding and formal financial education. Cardano Insights BV has no employees. The activities of Cardano Insights do not impact the risk profile of the group and therefore do not affect the pillar two capital requirement.

Cardano Limited was registered with Companies House during April 2016 and is dormant.

During October 2016 Cardano acquired Lincoln Pensions Limited (“Lincoln”), a pension scheme covenant advisory business. Cardano Holding Limited is the parent company of Lincoln. Lincoln is an appointed representative of Cardano Risk Management Limited.

Cardano Risk Management Limited is registered in England and Wales number 09050863, and is authorised and regulated by the Financial Conduct Authority.

Cardano Risk Management B.V. is incorporated and registered in the Netherlands, number 24308915. Cardano Risk Management B.V. is authorised by the Dutch Authority for the Financial Markets (AFM).

Cardano Holding Limited is a parent financial holding company in a member state and has two regulated subsidiaries, Cardano Risk Management Limited (“CRML”) and Cardano Risk Management BV (“CRM BV”); both of which are financial institutions under the CRD, but neither firm qualifies as a Capital Resource Regulation (CRD IV) investment firm due to not holding permissions in respect of dealing on own account, underwriting / placing, or holding client money or assets.

Both CRML and CRM BV have regulatory permissions to provide services to Professional clients with respect to advising, managing, and dealing in investments. These permissions relate to MiFID financial instruments and for CRML also Insurance Mediation Directive insurance products (life policies).

Consolidation has been undertaken in line with the FCA BIPRU requirements.

Cardano Group Capital Resources and Adequacy 31 December 2017

The Cardano Group relies entirely on tier 1 capital resources to meet regulatory and internally set capital requirements, consisting of share premium, share capital and other reserves. The capital resources are:

Cardano Group	
Share Premium	£20,688k
Share Capital	£9,998k
Other Reserves	£3,670k
Intangible Assets	£(13,682)k
Total Tier 1 Capital	£20,674k

As Cardano is not a credit institution (therefore credit risk is limited to non-lending commercial activities) and does not trade on its own account, the pillar 1 capital requirement is the fixed overheads requirement, which is greater than the pillar 2 requirement. Therefore, Cardano’s capital requirement is its fixed overheads requirements. This is:

Fixed Overheads £000’s	Risk Weight	Fixed Overheads Requirement £000’s
£34,485	25%	£8,622

The pillar 2 capital assessed through the Internal Capital Adequacy Assessment Process (“ICAAP”) is below the pillar 1 requirement. The pillar 2 requirement is the higher of estimated orderly wind down costs and the capital allocated to the top risks to the business.

There is no current or foreseen material practical or legal impediment to the prompt transfer of capital resources or repayment of liabilities among the parent undertaking and its subsidiary undertakings.

Interest rate risk

The value of the assets and liabilities are not deemed to be materially sensitive to interest rate movement. Cardano has not hedged its interest rate risk and has no long-term debt funding.

Risk Management Objectives and Policies

Cardano manages its business within a structured risk control framework which ensures that all material risks are properly identified, analysed, assessed and managed, following a systematic process that is consistently implemented across the entire organisation.

The risk control framework is overseen by dedicated risk managers based in the UK and Netherlands who are independent from the business teams and report directly to the Group Management Board member responsible for risk, the Group Chief Financial Officer.

The framework is implemented at a high level by means of a:

- Risk Strategy which contains the Risk Appetite Statement; and
- Risk Policy setting out the basic principles for risk management at Cardano

The risk control framework (“the Framework”) is owned by the Cardano Holdings Limited Management Board and is ratified annually for adoption by the local Boards. Responsibility for implementing the Framework rests with the Risk function.

The Cardano risk governance framework is based on a three lines of defence model. This model provides a simple and effective way to ensure good communication on risk management and control by clarifying essential roles and duties. The first line of defence rests with business managers in the local operating entities, who are responsible in the first instance for both the risks and returns of their decisions. The 2nd line is comprised of the independent functions, Risk, Legal and Compliance. These functions define the framework within which the business is allowed to work. The 3rd line is performed by external audit, which provides the Board with assurance that internal controls are effective. The most important tool in this respect is the ISAE 3402 Type 2 certification.

Risk governance framework



The primary control approach is to ensure that risks are reviewed and that awareness is created, as part of the regular management oversight that takes place daily on the job and via regular meetings representing all areas of the business and all levels of the organization.

Cardano employs a number of tools and documents to support its management of risk:

- A Risk Control Self-Assessment which is updated annually
- Regular reporting on risk landscape, status and developments to the Board
- ISAE 3402 Type 2 annual assessment
- All new products and services are risk-assessed prior to implementation.

Operational Risk

In order for Cardano to meet its strategic objectives it is imperative that operational risks are managed.

Cardano has adopted operational guidelines in which material processes are described, regular risk assessment that includes a review and discussion of the operational incidents registered, and an annual operational audit (ISAE 3402 Type II) performed by an independent auditor. The IT environment has been subject to extensive testing and audits and is deemed robust.

Market Risk

The activities of CRM BV and CRML are restricted to the limited permissions held. Both firms generally act as an agent and do not have any investments on their own balance sheets; for this reason, the market risk capital requirement is very limited.

Credit Risk

Cardano acts as an agent for its clients. For this reason, the exposure to risk of a loss due to default by a counterparty under an investment contract or security is limited. The main source of credit risk exposure is due to fees receivable and cash held on deposit. The standardised approach to credit risk (BIRPU 3.4) is applied by Cardano.

Liquidity Risk

Trade receivables are monitored on a regular basis and past due balances are chased accordingly. Liquidity is managed by the Finance function.

Management monitors rolling forecasts of the Group liquidity reserves, cash and cash equivalents, on the basis of expected cash flows.

Integrity risk

In order to identify and control integrity risks the Cardano operating companies have policies in place (e.g. incident reporting, anti-bribery & corruption, AML, conflict of interest etc.). Employees receive

training on these policies and supporting procedures and the Compliance and Risk activities facilitate oversight of the operational soundness of the business.

Cardano Remuneration Policy

Cardano maintains a remuneration policy that takes into account the Committee of European Banking Supervisors (CEBS) Guidelines on Remuneration Policies and Practices and local regulatory requirements in the UK and Netherlands. The Guidelines are designed to ensure that the remuneration policies and practices of EU financial institutions are aligned with their risk profile, risk appetite, and business strategy, and in particular, that they do not encourage employees to take risks that run counter to their firm's long-term interests.

Cardano acknowledges the importance of a well-designed remuneration policy, fully aligned with its clients' interests, and has incorporated the principles of the Guidelines into the Remuneration Policy, but tailored to Cardano's profile and proportionate to the nature of its services, size and complexity. The Remuneration Committee is responsible for approving the Remuneration Policy. The Remuneration Policy is reviewed annually and monitored by the Remuneration Committee. Local Management Boards are responsible for implementing the Remuneration Policy in their operating companies.

Conflicts of interest in relation to remuneration will be avoided insofar as possible and to the extent that such conflicts do arise they will be managed effectively with input from the Human Resources, Risk and Compliance functions. The Risk and Compliance functions will have significant input into the setting of individual remuneration awards where any concerns arise about the behaviour of any individuals or the riskiness of the business undertaken.

Remuneration of senior officers in the Risk and Compliance functions is directly overseen by the Local Management Board and the Group Management Board. Employees engaged in control functions are independent from the business units they oversee and remunerated in line with the achievement of objectives linked to their functions, independent of the performance of the business areas they control. To ensure that the method of determining remuneration for individuals involved in the Risk and Compliance functions does not compromise the objectivity of those individuals, variable compensation for such employees is based on a proportion of the employee's salary, rather than business performance.

The Group Remuneration Committee oversees compliance with the Cardano Remuneration Policy.

An appropriately structured compensation system is one of several key elements to our success as a business, delivering best in class services to pension funds and other financial institutions.

Key criteria for sustainable success are:

- Our ability to attract and retain top quality staff on a long-term basis
- Aligning the interests of staff with our clients
- Strong internal risk control framework to minimize operational risk
- An internal capital adequacy target of 225% of the minimum required regulated capital base at group level, acting as a cushion

The Remuneration Policy has been consciously designed to provide a market competitive long-term financial incentive to staff, as well as linking variable compensation directly to the strategic objectives of our clients.

A key aspect of the CEBS Guidelines is the principle of proportionality. This principle states that "qualifying firms may apply the provisions in different ways according to their size, internal organization, and the nature, scope and complexity of their activities". In many cases, this allows for the "neutralization" of specific requirements. This is especially true for "non-complex financial institutions" such as the Cardano Group, which is a risk & investment advisory and implementation provider, acting as an agent on behalf of professional clients, operating from two locations and is unlisted and not a systemic player. Reflecting these considerations, Cardano has chosen to "neutralize" some of the

requirements. Specifically, Cardano has decided to neutralize the requirement to disclose information regarding aggregated quantitative information in respect of awarded variable compensation.

The Remuneration Policy ensures alignment with the risk profile of the business, the business strategy and the interests of clients through;

- calculation of variable remuneration based on individual performance, performance of the business and profit;
- deferral of payment of variable remuneration for specified categories of staff;
- variable compensation being discretionary;
- malus adjustments for leavers;
- payment of guaranteed variable compensation during the year of joining only; and
- reduction to variable compensation in order to maintain the capital position if required.

Director remuneration is disclosed in the Cardano financial statements.

CRML, as a BIPRU limited license firm, the CEBS guidelines allow for neutralization in respect of some requirements. These are reflected in the BIPRU Remuneration Code's BIPRU remuneration principles proportionality rule. This requires a firm to comply with the requirements of the BIPRU remuneration principles to the extent that is appropriate to its size, internal organisation and the nature, scope and complexity of its activities. The FCA requires significant firms to make pillar 3 remuneration disclosures (those with total assets in excess of £50bn) and larger BIPRU firms to establish a remuneration committee. Therefore, CRML is not required to have a remuneration committee or make certain disclosures.

CRML employees' variable remuneration is discretionary and determined by the size of the profit pool and/or their contribution assessed against their objectives, the company values and the values determined for their team. Those that meet specific salary and variable remuneration levels are subject to deferred variable remuneration.

CRM BV uses a discretionary variable remuneration mechanism with a deferral whenever appropriate. Individual performance is assessed using competence criteria and the CRM BV Compensation Principles. Share of the profit pool is allocated on a discretionary basis and subject to the variable compensation cap of 20% of a person's total annual fixed remuneration.

An exception applies to the 20% cap in case of exceptional performance of an employee. An employee may receive a variable remuneration exceeding 20% of the fixed remuneration for outstanding performance if:

- i) the average percentage of fixed/variable remuneration of all CRM BV employees (a) who mainly work in the Netherlands does not exceed 20% of the fixed remuneration; and
- ii) the variable remuneration of the individual employee does not exceed 100% of the employee's fixed remuneration.

Further information about CRM BV's remuneration policy can be found at our Netherlands Cardano website: www.cardano.com.