



Public Corporate Governance Report 2022

May 2023

*Full version (as approved by the Management Board of
the European XFEL GmbH)*

NOTE: As a research facility with international shareholders and whose working language is English, European XFEL has developed the present Public Corporate Governance Report in English. Its introduction, description of the PCGC aims and structure, declaration of compliance, and executive summary are translated into German. Other parts will be translated into German upon request via contact@xfel.eu.

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I Introduction

The European X-Ray Free-Electron Laser Facility GmbH (hereinafter “*Company*”) was founded end of 2009. The Company is a publicly funded, limited liability company under German private law with several international research institutions and states as Shareholders. It is based on an intergovernmental “*Convention concerning the construction and operation of a European X-Ray Free-Electron Laser Facility*”¹ and is located in the Hamburg area, Germany. The Company exclusively and directly pursues not-for-profit objects in the field of science and research (Art. 3 of the Company’s Articles of Association, as attached to the Convention², hereinafter “*AoA*”). Via the majority shareholder, Deutsche Elektronen-Synchrotron (DESY), which owns about 57% of the Company’s share capital, the Federal Republic of Germany holds an indirect majority stake in the Company. Therefore, the Public Corporate Governance Code³, as revised by the German Federal Government on 16 September 2020 (hereinafter “*PCGC*”), is basically applicable for the Company (Sec. 2.4 PCGC). Against this background, the shareholders’ meeting of the Company, the “*Council*” (cf. Art. 7 AoA), approved at its 35th meeting on 17-18 November 2021 “*the application of the German Public Corporate Governance Code, in its respective valid version*”⁴.

¹ Available (in German and English), among others, on the following webpage of the German Federal Foreign Office:
<https://www.auswaertiges-amt.de/en/aussenpolitik/themen/internatrecht/uebersicht/248620>

² For historical reasons, a short version of the AoA including similar not-for-profit objects is currently registered in the German Commercial Register and therefore formally applicable for the time being. However, the long AoA, as attached to the Convention, shall apply unofficially (cf. Summary of Decisions of the 3rd Council meeting, XFEL_Council_10-22, pp. 6-7).

³ Available (in German and English), among others, on the following webpage of the German Finance Ministry:
https://www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Bundesvermoegen/Privatisierungs_und_Beteiligungspolitik/Beteiligungspolitik/grundsaeetze-guter-unternehmens-und-aktiver-beteiligungsfuehrung.html

⁴ Summary of Decisions of the 35th Council meeting, XFEL_Council_21-51, p. 16.

II Aims and structure of the PCGC

The PCGC aims to enhance transparency, responsibility, control, and public trust in companies in which the Federal Republic of Germany holds directly or indirectly a majority stake (cf. PCGC preamble).

It sets out recommendations and suggestions, along with rules that reflect applicable law. The recommendations contained in the PCGC use the word “*shall*”. The recommendations were developed on the basis of the legal relationships that apply to corporations. However, they are also to be applied, to the extent possible, to the structures and bodies of companies with other legal forms. By considering the needs that are specific to particular legal forms and businesses, the PCGC enables a greater degree of flexibility and self-regulation. Companies may deviate from the recommendations if they disclose and explain such deviations in their annual corporate governance reports. In addition, the PCGC contains suggestions, which are formulated using the words “*should*” or “*may*”. Companies may deviate from such suggestions without having to make a disclosure. The other PCGC parts that are formulated differently set out either rules that, as applicable law, already require compliance by companies, or definitions of terms (Sec. 1 PCGC).

III Declaration of compliance

In accordance with Sec. 7.1 PCGC, the management (which is acc. to Art. 7 lit. b AoA the “*Management Board*”), at its meetings on 4 July 2023, declared that the Company had complied in 2022 and continued to comply with the PCGC principles (mandatory provisions reflecting applicable law, PCGC recommendations and suggestions), with the exceptions outlined in this annual public corporate governance report and summarized in its executive summary.

IV Executive summary

The annual public corporate governance report 2022 can be summarized as follows.

PCGC principles	PCGC provisions	Impl.	If not, reasons
1 Shareholders and shareholders' meeting			
1.1	Tasks and responsibility of the shareholders' meeting		
1.1.1	PCGC implementation in AoA	Sec. 3.1	(+/-) At its planned revision, PCGC shall be implemented in the AoA. As an interim solution for efficiency reasons (because AoA revisions are cost- and labour-intensive for all stakeholders), the PCGC shall apply following a simple, but also binding decision taken by the Council.
1.1.2	Fundamental decisions	Sec. 3.1	(+) —
1.2	Preparation and implementation of the meeting of the supervisory body / Council	Sec. 3.2	(+) —
1.3	Non-restriction of employee participation	Sec. 3.3	(+) —
2 Collaboration of the management and supervisory body			
2.1	Basic rules		
2.1.1	Strategic coordination	Sec. 4.1.1	(+) —
2.1.2	Transactions and operations of fundamental importance	Sec. 4.1.2	(+) —
2.1.3	Provision of information	Sec. 4.1.3	(+) —
2.2	Confidentiality	Sec. 4.2	(+) —
2.3	Accountability	Sec. 4.3	(+) —
2.4	No granting of loans	Sec. 4.4	(+) —
3 Management			
3.1	Tasks and competences	Sec. 5.1	(+) —
3.2	Composition		
3.2.1	Amount	Sec. 5.2.1	(+) —

PCGC principles		PCGC provisions	Impl.	If not, reasons
3.2.2	Selection process	Sec. 5.2.2	(+)	—
3.2.3	Cooling-off period	Sec. 5.2.3	(+/-)	Deviation only in one case since the Company formation, justified by the market situation at the time, in which the cooling-off recommendation of Sec. 5.2.3 PCGC did not yet exist.
3.2.4	Appointment period	Sec. 5.2.4	(+/-)	Deviation for the first (not for further) appointment period was chosen intentionally, considering the difficulty to fill a director position for a shorter period.
3.2.5	Age limit	Sec. 5.2.5	(+/-)	Age limit is not foreseen in the Company's bylaws, but in fact observed by BMBF playing a central role in the (re)appointment procedures. All current appointment periods observe the statutory retirement age.
3.2.6	Rules of procedure	Sec. 5.2.6	(+)	—
3.3	Remuneration			
3.3.1	Remuneration criteria	Sec. 5.3.1, 5.3.2	(+/-)	Company's remuneration system, which applies also at other similar publicly funded German research facilities, is prescribed and regularly reviewed by BMBF, which also enforces it due to its central role at the contract negotiations.
3.3.2	Performance-based pay component	Sec. 5.3.2 – 5.3.4	(+)	—
3.3.3	Provision for reducing remuneration	Sec. 5.3.2 para. 4	(-)	It is expected that this recommendation, which was newly established at the recent PCGC revision, will be duly considered in future contract templates provided by BMBF playing a central role in the contract negotiations.
3.3.4	Early termination	Sec. 5.3.2 para. 6, 5.3.5	(+)	—
3.4	Conflicts of interests			
3.4.1	Binding to Company purpose and objective	Sec. 5.4.1	(+)	—
3.4.2	Non-competition	Sec. 5.4.2	(+)	—
3.4.3	No third-party benefits	Sec. 5.4.2, 5.4.3	(+)	—

PCGC principles		PCGC provisions	Impl.	If not, reasons
3.4.4	Ancillary activities	Sec. 5.4.4	(+)	—
3.4.5	No contracts with former Directors	Sec. 5.4.5	(+)	—
3.5	Sustainable governance			
3.5.1	German Sustainable Development Strategy and UN Sustainable Development Goals	Sec. 5.5.1	(+)	—
3.5.2	Gender-equal, tolerant, and discrimination-free Company culture	Sec. 5.5.2	(+)	—
3.5.3	Reconciliation of family and working life	Sec. 5.5.3	(+)	—
3.5.4	Equal pay for equal work	Sec. 5.5.4	(+)	—
3.5.5	Works council	Sec. 5.5.5	(+)	—
3.5.6	No aggressive tax avoidance or tax reduction measures	Sec. 5.5.6	(+)	—
4 Supervisory Body / Council				
4.1	Tasks and competences			
4.1.1	AoA including a supervisory body in terms of “ <i>Aufsichtsrat</i> ”	Sec. 6.1.1 para. 1	(-)	In accordance with the statutory judgement of Sec. 1 para. 2 no. 2 lit. a of the German One-Third Participation Act (<i>Drittelbeteiligungsgesetz</i>) to grant privileges to so called “ <i>Tendenzbetriebe</i> ” like research institutes and due to its international orientation following well-established governance structures, the Company does not have a supervisory body in terms of a “ <i>Aufsichtsrat</i> ”. The typical tasks of an “ <i>Aufsichtsrat</i> ”, namely supervising and advising the management, are incumbent upon the Company’s shareholders’ meeting (Council), which is supported by various advisory bodies.
4.1.2	Fundamental decisions	Sec. 6.1.1 para. 3 and 4	(+)	—
4.1.3	Rules of procedure	Sec. 6.1.2	(+)	—
4.1.4	Chair	Sec. 6.1.3, 6.1.4	(+)	—

PCGC principles		PCGC provisions	Impl.	If not, reasons
4.1.5	Advisory committees	Sec. 6.1.5 – 6.1.8	(+)	—
4.1.6	Review	Sec. 6.1.9	(+)	—
4.2	Composition			
4.2.1	Members	Sec. 6.2.1	(-)	Several shareholding institutes, which in some way or another scientifically compete with the Company's Facility, are represented by their delegates in the Council. Given the way international scientific projects such as the European XFEL are usually structured, this is unavoidable and not comparable to a participation of competitors in the supervisory body, e.g. of a stock company (<i>Aktiengesellschaft</i>).
4.2.2	Age limit	Sec. 6.2.2	(-)	None of the Company's bylaws do foresee an age limit for Council members, who are appointed by the respective shareholders. But, in fact, the Council currently complies with statutory age limits.
4.2.3	In person	Sec. 6.2.3	(+)	—
4.2.4	No former Directors	Sec. 6.2.4	(+)	—
4.3	Remuneration	Sec. 6.3	(+)	—
4.4	Conflict of interests			
4.4.1	Acting in Company's interest	Sec. 6.4.1	(+)	—
4.4.2	Cooling-off period	Sec. 6.4.2	(+)	—
4.5	Meetings	Sec. 6.5	(+)	—
5	Transparency			
5.1	Declaration of compliance and public corporate governance report	Sec. 7.1	(+)	—
5.2	Information on the remuneration of the Directors and the supervisory body			

PCGC principles	PCGC provisions	Impl.	If not, reasons
5.2.1 Remuneration of Directors	Sec. 7.2.1	(-)	Although all Directors are willing to disclose their remuneration, it was agreed with the Council to deviate from this PCGC recommendation, as such a detailed publication could have undesirable effects, e.g. when negotiating, within a highly competitive international setting, the remuneration with future Management Board members.
5.2.2 Remuneration of members of supervisory body	Sec. 7.2.2	(+)	—
5.3 Publications	Sec. 7.3	(+)	—
5.4 Information about women in management positions	Sec. 7.1	(+)	—
6 Financial reporting and auditing			
6.1 Financial reporting	Sec. 8.1.1, 8.1.2	(+)	—
6.2 Audit of the annual financial statement			
6.2.1 Appointment of auditor	Sec. 8.2.1	(+)	—
6.2.2 Tender process	Sec. 8.2.2	(+)	—
6.2.3 Impartiality declaration	Sec. 8.2.3	(+)	—
6.2.4 Information obligations	Sec. 8.2.4	(+)	—
6.2.5 Special audit content: German Budgetary Principles Act and PCGC compliance	Sec. 8.2.5	(+)	—
6.2.6 Meeting participation	Sec. 8.2.6	(+)	—

V PCGC principles and its implementation

1 Shareholders and shareholders' meeting

1.1 Tasks and responsibility of the shareholders' meeting

1.1.1 Implementation of the PCGC in AoA

a) Principle

The shareholders' meeting shall stipulate in the articles of association that the Company must apply the current valid version of the PCGC (Sec. 3.1 PCGC).

b) Implementation (+/-, but justified)

Following a Council decision at its 3rd meeting on 23 February 2010⁵, the Company has to revise its AoA in the context of the upcoming completion of the European XFEL construction phase. At that revision, also the application of the PCGC shall be codified within the AoA⁶. In the meantime and as an interim solution for efficiency reasons (because AoA revisions are cost- and

⁵ Cf. Summary of Decisions of the 3rd Council meeting, XFEL_Council_10-22, pp. 6–7.

⁶ Cf. Summary of Decisions of the 35th Council meeting, XFEL_Council_21-51, p. 16.

labour-intensive for all stakeholders), the PCGC shall apply following a simple but also binding decision taken by the Council at its 35th meeting on 17-18 November 2021⁷.

1.1.2 Fundamental decisions

a) Principle

The shareholders' meeting makes resolutions on fundamental decisions of the Company in its meetings (Sec. 3.1 PCGC).

b) Implementation (+)

The Council is basically responsible for resolution on all fundamental Company issues, like changes to the AoA (Art. 11 para. 2 lit. c AoA), amendments of the Financial Rules and of the operation cost repartition scheme (Art. 11 para. 2 lit. f and h AoA), and adoption of the annual budget and the annual financial statements (Art. 11 para. 3 lit. c and d AoA), as well as personnel decisions related to the Management Board (Art. 11 para. 3 lit. e AoA).

1.2 Preparation and implementation of the meeting of the shareholders' meeting / Council

a) Principle

Shareholders' meetings shall be convened at least once a year with a precise agenda included in the convening notice. Minutes of the shareholders'

⁷ Cf. Summary of Decisions of the 35th Council meeting, XFEL_Council_21-51, p. 16.

meeting shall be kept. Likewise, any decisions made by shareholders outside of meetings shall be recorded (Sec. 3.2 PCGC).

b) Implementation (+)

The Council has issued itself with rules of procedure (hereinafter “*RoP-Council*”)⁸. The Council is convened at least twice a year with a precise agenda presented in the convening notice (Art. 10 para. 1 AoA, Art. 7.2 RoP-Council). Minutes of the shareholders’ meeting are kept and any Council decisions outside meetings are recorded (Art. 15.3 RoP-Council).

1.3 Non-restriction of employee participation

a) Principle

The shareholders’ meeting shall refrain from taking measures that restrict or prevent employee participation in accordance with the German 1976 Co-determination Act (*Mitbestimmungsgesetz*) and the German One-Third Participation Act (*Drittelbeteiligungsgesetz*; Sec. 3.3 PCGC).

b) Implementation (+)

As the German 1976 Co-determination Act (*Mitbestimmungsgesetz*) and the German One-Third Participation Act (*Drittelbeteiligungsgesetz*) are not applicable to the Company as a research institute with much fewer than 2 000 employees, the Council could not even take such measures.

⁸ Last amended by the Council at its 29th meeting on 27–28 June 2019.

2 Collaboration of the management and supervisory body

The management and the supervisory body shall collaborate on the basis of reciprocal trust in the best interests of the Company (Sec. 4.1.1 para. 1 PCGC).

2.1 Basic rules

2.1.1 Strategic coordination

a) Principle

The management shall develop the strategic direction of the Company, coordinate with the supervisory body and discuss with it at regular intervals the progress made in implementing the strategy (Sec. 4.1.1 para. 2 PCGC).

b) Implementation (+)

The Management Board takes part in Council (which acts not only as the shareholders' meeting, but took over also the tasks of an supervisory body; cf. no. V. 4.1.1 below), Administrative Finance Committee (hereinafter "AFC"), Scientific Advisory Committee ("SAC"), and Machine Advisory Committee ("MAC") meetings, each of which takes place at least twice a year, where—among other items—it presents and discusses with the committee members nominated by the shareholders status reports regarding e.g. important project management or financial matters and agrees with them on a strategy how to proceed in the future.

2.1.2 Transactions and operations of fundamental importance

a) Principle

It shall be set out in the articles of association/bylaws of the Company that transactions and operations of fundamental importance are to be approved by the Council, including significant changes to the business activity or financial situation (Sec. 4.1.2 PCGC).

b) Implementation (+)

The Company's AoA stipulates that the Council is basically responsible for resolution on all fundamental Company issues. It is responsible in all cases provided by law (Art. 11 para. 1 AoA). Furthermore, the Council has to approve inter alia amendments to the AoA, the Financial Rules of the Company, its medium-term scientific programme, the annual budget, and medium-term financial estimates (Art. 11 para. 2 lit. c, lit. f, para. 3 lit. b, lit. c AoA).

2.1.3 Provision of information

a) Principle

The management shall inform the supervisory body regularly in writing about all issues relevant to the Company. Such regular reports shall also govern the Company's (future) strategy and risk assessment. The regular reports shall be submitted to the members of the supervisory body or its committees at the latest 14 days prior to the respective meeting. For extraordinary meetings, the preparatory documents shall be provided in sufficient time (Sec. 4.1.3 para. 2, 5, and 5 PCGC).

The management shall inform the chair of the supervisory body without delay regarding any important events (special reports; Sec. 4.1.3 para 3 PCGC).

It is the responsibility of the supervisory body to call on the management to provide it with information appropriately and without delay. To this end, the supervisory body shall specify the information and reporting obligations of the management in more detail and shall, when necessary, request to be briefed on company matters (Sec. 4.1.3 para. 5 PCGC).

b) Implementation (+)

Art. 6 of the Rules of Procedure of the Management Board (hereinafter “*RoP-Management Board*”)⁹ determines that “*the Management Board shall supply the committees [Council, AFC, SAC, MAC] with all necessary information*”.

In practice, this information duty is fulfilled by the presentation of written Management Board reports, annual financial statements, the external auditor’s reports (in addition, cf. Art. 18 AoA), and regular status updates concerning safety matters, scientific usage of the facility, risk management, shareholders contributions, and equal opportunities aspects, etc. at diverse committee meetings. Subject and content of such documents are closely coordinated between the Management Board and the respective committee(s). The documents must be circulated at least 20 calendar days before the date of the meeting (cf. Art. 7.3 RoP-Council). In case of an extraordinary meeting, they shall be circulated with the notice convening the meeting (cf. Art. 7.3 RoP-Council).

Between Council meetings, the Management Board is in regular contact with the Council Chairs. Special reports are provided to them without undue delay.

2.2 Confidentiality

a) Principle

Good corporate governance requires open discussions between the management and the supervisory body as well as within the management and the supervisory body. Because confidentiality is of the utmost importance, these bodies and members of these bodies must ensure that any third parties they may involve comply with the confidentiality obligations in the same way (Sec. 4.2 PCGC).

⁹ As adopted by the Council at its 4th meeting on 11 May 2010.

b) Implementation (+)

The Council and its members are committed to confidentiality against third parties by statutory law and by Art. 24 AoA. The same applies to the Management Board (Art. 4 RoP-Management Board).

2.3 Accountability

a) Principle

Companies whose company bodies are subject to increased liability risks may take out directors and officers (D&O) liability insurance for the members of the management and the supervisory body (Sec. 4.3 PCGC).

b) Implementation (+)

Because it is difficult to justify D&O insurances for the Management Board, an exemption from liability similar to that in place at German research institutes was implemented at the Company. The Council, in regard to the increased entrepreneurial risks in managing a publicly funded but privately organized world-class research facility like the European XFEL Company, decided at its 8th meeting on 29–30 June 2011 on the following exemption from liability for the members of the Management Board:

1 *“Die Haftung der Mitglieder der Geschäftsführung wird (entsprechend der nach deutschem Recht für Bundesbeamte jeweils geltenden Regelungen) auf Vorsatz und grobe Fahrlässigkeit beschränkt.”*

(= “The members of the Management Board shall only be liable for damages caused by wilful misconduct or gross negligence (in line with the relevant provisions applicable to Federal Government officials under German law).”)

2 *“Die Gesellschaft stellt die Mitglieder der Geschäftsführung dementsprechend von Ansprüchen Dritter frei, es sei denn, diesen Ansprüchen liegt ein vorsätzliches oder grob fahrlässiges Verhalten der Mitglieder der Geschäftsführung zugrunde.”*

(= “Accordingly, the Company exempts the members of the Management Board from any damage claims by third parties, unless these claims arise out of wilful misconduct or gross negligence on the part of the members of the Management Board.”)¹⁰

This exemption from liability is not applicable for members of the Council. Also, D&O insurance policies for Council members were not concluded by the Company.

2.4 No grating of loans

a) Principle

The Company shall not grant any loans to members of the management or the supervisory body, or to their relatives, or to employees of the Company, except when such loans are granted to employees as part of the employer’s duty of care or to ensure that work is performed, e.g. in the form of an advance on salary (Sec. 4.4 PCGC).

b) Implementation (+)

No loans have ever been granted by the Company to the members of the Management Board and the Council, or to their relatives. Only in exceptional cases and following an approval by two Directors (including one Managing Director), minor loans were provided to new employees as part of the employer’s duty of care, typically for reallocation purposes in form of an advance on the international allowance.

¹⁰ Cf. Summary of Decisions of the 8th Council meeting, XFEL_Council_11-37, pp. 12-13.

3 Management

3.1 Tasks and competences

a) Principle

The management shall ensure compliance with statutory provisions and the Company's internal guidelines and must promote compliance with these guidelines. The management shall ensure that appropriate measures are put in place in line with the Company's risk situation (compliance management system). This also includes measures to prevent corruption. The unit that is responsible for compliance shall report directly to the management. The management shall ensure appropriate risk management and risk control within the Company (Sec. 5.1 PCGC).

b) Implementation (+)

In 2012, the Management Board adopted Risk Management Guidelines codifying a risk management system, led by a risk coordinator, to recognise, monitor, and mitigate Company risks. In 2013, the Company hired an internal auditor, whose responsibility is, among others, to survey the European XFEL Company's Anti-Corruption Policy put into force in spring 2014, which shall prevent benefit-taking of the Company's employees, including the Directors. In 2021, the Company hired a customs and export control officer, whose sole task it is to assure that the Company complies with export control and customs laws. Risk coordinator, internal auditor, and customs and export control officer are staff functions that directly report to the Management Board.

3.2 Composition

3.2.1 Amount

a) Principle

The management shall consist of at least two persons (Sec. 5.2.1 PCGC).

b) Implementation (+)

According to Art. 13 para. 1 lit. a AoA, the Management Board is composed of at least two managing directors and, if appropriate, additional scientific/technical directors. At present, the Management Board consists of two managing directors and three scientific directors (acting towards third parties as proxy holders).

3.2.2 Selection process

a) Principle

The members of the management (hereinafter referred to “*Directors*”) shall be recruited by means of a transparent selection process and thereby ensuring diversity. The decision shall be documented with key considerations (Sec. 5.2.2 PCGC).

b) Implementation (+)

The “*Guidelines for selection and appointment of Directors of the European XFEL Company*”¹¹ were implemented by the Council to select and (re)appoint the “*best possible candidates in a timely, transparent, cost effective, and professional manner*”. According to these “*Guidelines*”, the whole search, selection, and (re)appointment process, including the final decisions to be taken by the Council (and prepared by Council sub-committees like the Search and Selection Committee (SSC), the Interview Committee (IC), and/or

¹¹ Last amended by the Council at its 34th meeting on 16–17 June 2021.

the Negotiation Committee (NC)), is duly documented. Aspects of diversity are always considered by the Council.

3.2.3 Cooling-off period

a) Principle

Former members of the supervisory body shall not move to the management before the expiry of one year following the end of their mandate (Sec. 5.2.3 PCGC).

b) Implementation (+/-, but justified)

Only in one single case since the formation of the Company, justified by the market situation at the time, in which the cooling-off recommendation of Sec. 5.2.3 PCGC did not yet exist, a former Council member became Director without observing a cooling-off period of one year.

3.2.4 Appointment period

a) Principle

The appointment of the Directors for the first time shall be limited to a maximum of three years. The Directors shall be appointed for a period of a maximum of five years per appointment period. A reappointment before the expiry of one year before the end of the appointment period shall take place only for compelling reasons (Sec. 5.2.4 PCGC).

b) Implementation (+/-, but justified)

According to Art. 13 para. 3 sent. 1 AoA, the “*Directors shall be appointed for a period not exceeding five years.*” The deviation from the PCGC for the first (not for further) appointment period was chosen by the Council intentionally, considering the difficulty to fill a director position for a shorter period.¹²

¹² Among others, cf. Council document XFEL_21-24, p. 2.

According to no. 2.1 of the “*Guidelines for selection and appointment of Directors of the European XFEL Company*”, reappointments are basically possible only once, which is even stricter than the PCGC recommendations. According to no. 2.2 and 3.1 of these “*Guidelines*”, reappointment procedures shall start two years before the expiry of the appointment in order to ensure a completion of the reappointment procedure at least six months before the new term would commence. A completion earlier than one year before the end of the present term is practically impossible due to the complexity of the reappointment procedure and has never taken place since the founding of the Company.

3.2.5 Age limit

a) Principle

An age limit for the Directors shall be specified in the rules of procedure in line with the statutory requirements. The period for which a Director is appointed shall be calculated in such a way that this age limit is not exceeded (Sec. 5.2.5 PCGC).

b) Implementation (+/-, but justified)

An age limit for Directors is not foreseen in the Company’s bylaws but in fact observed due to the sharp eye of the German Federal Ministry of Education and Research (BMBF), which plays a central role in the (re)appointment of Directors (stipulated in particular in no. 3.2 and 6.1 of the “*Guidelines for selection and appointment of Directors*”). All current appointment periods observe the statutory retirement age.

3.2.6 Rules of procedure

a) Principle

The management’s rules of procedure shall regulate the allocation of duties and the cooperation within the management. The company body that is responsible for appointments may appoint a spokesperson for the management (Sec. 5.2.6 PCGC).

b) Implementation (+)

The Rules of Procedure of the Management Board, as adopted by the Council at its meeting on 11 May 2010, allocates responsibilities to certain Directors and regulates their cooperation. The Chair of the Management Board, a role already foreseen in the Company's AoA, will be appointed by the Council.

3.3 Remuneration

3.3.1 Remuneration criteria

a) Principle

The supervisory body shall adopt criteria for the remuneration of the Directors. It shall review these criteria on a regular basis and adjust them when necessary. The criteria shall be documented, as shall the key considerations that influenced the decisions on the criteria (Sec. 5.3.1 PCGC).

The supervisory body shall agree on a suitable amount for the remuneration of the Directors, including the maximum remuneration. The remuneration shall be unambiguously specified in the employment contract (Sec. 5.3.2 PCGC).

b) Implementation (+/-, but justified)

The Company's remuneration system, which applies also at other similar publicly funded German research facilities, is prescribed and regularly reviewed by the BMBF, who also enforces it due to its central role at the contract negotiations.

The specific remuneration of a Director is stipulated within his/her employment contract following a corresponding approval by the Council (cf. Art. 11 para. 3 lit. e AoA).

3.3.2 Performance-based pay component

a) Principle

If variable compensation is provided, this shall take into consideration the personal performance of the respective Director. The variable compensation shall consist of one-off or regularly occurring components that are connected to personal performance and to the sustainable success of the Company, and components that combine long-term incentives with a risk factor (such as a system of bonuses and deductions for good or poor performance). The objectives shall be sufficiently ambitious, have deadlines and be as a rule unambiguously measurable; only in justified exceptional cases may, in addition to measurable objectives, an objective also be agreed whose achievement can only be determined using a margin of discretion. To ensure measurability, the individual weighting and the specific calculation basis, including the relevant levels of objective achievement, shall also be specified for every objective. The preconditions for the occurrence and payment of variable remuneration components shall be stipulated by the Council in an objectives agreement for the respective Director before the beginning of the respective calculation period. After the expiry of the calculation period, the competent company body shall calculate, depending on whether the objectives have been achieved, the amount of the individual variable remuneration components that are to be granted overall for this calculation period (Sec. 5.3.2 to 5.3.4 PCGC).

b) Implementation (+)

According to the “*Procedure for performance-based pay of European XFEL Directors*”¹³, all Directors “*should also receive a performance-based variable pay component*”. Currently, such variable pay component is implemented for all Directors, since 1 April 2023 also for the Administrative Director . The criteria for performance-based variable pay component are agreed within a

¹³ As adjusted by the Council at its 32nd meeting on 19–20 November 2020.

written target agreement between the respective Director and a Council subcommittee before the evaluation period commences and reviewed at the end of this period by the Council subcommittee. The target agreements include “*common targets*” applicable for all Directors, reflecting the joint responsibility for a successful operation and further development of the European XFEL Facility, as well as “*individual targets*” referring to the Director’s individual responsibilities. All targets shall be brief, clear, and, as far as possible, measurable. Their respective weighting is specified in the target agreement.

3.3.3 Provision for reducing remuneration

a) Principle

The possibility of reducing or recovering parts of the remuneration shall be regulated in the employment contract of each Director, if continuing to provide the agreed remuneration would be unreasonable for the Company as a result of its economic situation, and for the event of a significant breach of duty by the Director (Sec. 5.3.2 para. 4 PCGC).

b) Implementation (-, but justified)

The possibility of reducing or recovering parts of the remuneration, if continuing to provide the agreed remuneration would be unreasonable for the Company as a result of its economic situation, and for the event of a significant breach of duty by the Director, as recommended in Sec. 5.3.2 para. 4 PCGC, is not yet foreseen in the current employment contracts. It is expected that this recommendation, which was newly established in the revised PCGC, will be duly considered in future contract templates provided by the BMBF playing a central role at the contract negotiations.

3.3.4 Early termination

a) Principle

Payments to a Director in the event of an early termination shall, including additional benefits, as a maximum, not exceed the value of two annual

remunerations. A compensation payment for the restraint on competition shall be deducted from a compensation payment (Sec. 5.3.2 para. 6 PCGC).

Multi-year remuneration components shall not be paid out ahead of time nor shall advance payments be made on these components. An exception is made only for a lump-sum payment for claims in the event of an early termination of the appointment and employment as a member of the management (Sec. 5.3.5 PCGC).

b) Implementation (+)

Neither payments to a Director in the event of an early termination nor advance payments to a Director were ever made since the founding of the Company.

3.4 Conflicts of interest

3.4.1 Binding to Company purpose and objective

a) Principle

Members of the management are obliged to follow the Company purpose and objective (Sec. 5.4.1 PCGC).

b) Implementation (+)

According to Art. 15 AoA, the *“Directors are obliged to manage the Company conscientiously and with due diligence in the interest of the Company, and in accordance with the Convention and the statutory law of the Federal Republic of Germany [...], the relevant valid version of these Articles of Association, the Rules of Procedure for the Management Board decreed by the Council, the directions and resolutions of the Council”*.

3.4.2 Non-competition

a) Principle

The Directors shall be subject to a comprehensive non-competition obligation for the duration of their work for the Company (Sec. 5.4.2 PCGC).

b) Implementation (+)

As Directors' employment contracts allows only ancillary activities, where a conflict of interest is not conceivable, a comprehensive non-competition clause is implicitly in place (argumentum a minori ad maius).

3.4.3 No third-party benefits

a) Principle

No Directors may pursue personal interests when taking decisions nor may they accept any benefits from third parties in connection with their activities, neither for themselves nor for other persons, nor may they offer, promise, or grant unjustified benefits to third parties (Sec. 5.4.2 PCGC). Any conflicts of interest shall be disclosed without delay to the supervisory body (Sec. 5.4.3 PCGC).

b) Implementation (+)

The Company has a strict anti-corruption policy, which also covers all members of the Management Board (see no. V.3.1 above).

In addition, Art. 5 of the RoP-Management Board states that *"the members of the Management Board shall announce if any issue to be dealt with by the Board directly or indirectly affects their personal affairs and, if applicable, shall not participate in any debate or decision-making process concerning such issues."*

3.4.4 Ancillary activity

a) Principle

The Directors shall engage in ancillary activities only with the approval of the Council; this shall apply in particular to position in supervisory bodies (Sec. 5.4.4 PCGC).

b) Implementation (+)

According to the Directors' employment contracts, ancillary activities have to be approved by the Council Chair. This requirement applies also to (paid or non-paid) positions in supervisory bodies. Only in the exceptional case of non-paid ancillary activities, where a conflict of interest is not conceivable, the approval shall be deemed to have been granted.

3.4.5 No (consultancy) contracts with former Directors

a) Principle

No contracts shall be concluded with former Directors for a period of 24 months after their departure under which they provide services to the Company (e.g. consulting). An exception is made for scientific institutions in exceptional cases, to the extent that the aim of the contract is the continued participation of the individuals in scientific projects which were initiated before their departure (Sec. 5.4.5 PCGC).

b) Implementation (+)

No (consultancy) contract with a former Director exists currently. For potential future cases, the boundary conditions set by the newly established Sec. 5.4.5 PCGC for scientific institutions would be duly considered.

3.5 Sustainable governance

3.5.1 German Sustainable Development Strategy and UN Sustainable Development Goals

a) Principle

The management shall take steps to ensure sustainable governance as set out in the German Sustainable Development Strategy and the UN Sustainable Development Goals¹⁴ (Sec. 5.5.1 PCGC).

b) Implementation (+)

The management is committed to and has already taken significant steps to ensure sustainable corporate management, as set out in the German Sustainable Development Strategy and the UN Sustainable Development Goals (SDG), e.g. via using solely “green” power to operate its electricity-intensive *research facility* (cf. goal 13 UN SDG).

In addition, the Company plans to apply the “Leitfaden Nachhaltigkeit”¹⁵ compiled by the three big German research organizations Fraunhofer-Gesellschaft, Leibniz and Helmholtz Association. These guidelines focus on research-specific sustainability management and their application for European XFEL is part of the current strategy discussion.

In order to develop an environmental sustainability strategy, the management has described the overall concept as part of the European XFEL Strategy 2030+ and set up a process to identify the main action points in which the Company can create impact in sustainability. Now, the implementation of the

¹⁴ Both available in English under <https://www.bundesregierung.de/breg-en/issues/sustainability/germany-s-national-sustainable-development-strategy-354566> and <https://sdgs.un.org/goals>.

¹⁵ Available in German under: <https://www.nachhaltig-forschen.de/startseite/>

most important steps has to take place. This process is supported by external experts in sustainability.

3.5.2 Gender-equal, tolerant, and discrimination-free Company culture

a) Principle

The management shall ensure a gender-equal, tolerant, and discrimination-free culture within the Company, with equal opportunities for personal development irrespective of ethnic origin, gender, religion or worldview, disability, age, or sexual identity. It shall ensure that a discrimination-free working culture exists at all levels, including a non-discriminatory use of language and protection against sexual harassment. Employees and managers shall be supported in this respect in the form of opportunities for training and for receiving information (Sec. 5.5.2 PCGC).

b) Implementation (+)

The Company's Equal Opportunities (EOs) Policy, as established by the Management Board¹⁶, provides principles for meeting the Company's obligation to provide a working and learning environment free from unlawful direct and indirect discrimination, including (sexual) harassment, based on ethnic origin, gender, religion or worldview, disability, age, or sexual identity. In 2022, a Gender Equality and Diversity Plan (GEDP), initially covering the period between 1 July 2022 and 30 June 2024, was established and published internally and externally¹⁷. Main thematic focus of the GEDP is to enhance gender equality, cultural diversity, and inclusion in the Company by implementing a comprehensive set of varied measures.

The Company has two Equal Opportunity Spokespersons elected by the Company staff in line with the EOs Policy every two years, and, since 2022, a

¹⁶ Last amended on 17 November 2015.

¹⁷ Available in English on the Company's webpage:
https://www.xfel.eu/sites/sites_custom/site_xfel/content/e41777/e158744/e168706/xfel_file168707/GEDP_websiteVersion_eng.pdf

Diversity Officer (on a half-time basis) appointed directly by the Management Board. With a view to sustainably implement the GEDP, the EOs/Diversity team regularly organizes and enhances activities (like consultation and mediation in case of conflicts; organization of diversity trainings, discussion rounds, networking meetings, family-oriented social activities and publications regarding EOs-related topics; participation in selection panels and regular reporting to the Management Board, staff, AFC, and Council).

3.5.3 Reconciliation of family and working life

a) Principle

The management shall promote a working culture that reconciliates family and working life (Sec. 5.5.3 PCGC).

b) Implementation (+)

By offering e.g. telecommuting, the possibility to work part-time, family-friendly meeting times, emergency childcare (“*Notmütter*”), a parent–child office, support of partners in their search of work in the Hamburg area (“*double career*”), and family-oriented activities, such as the yearly summer company outing for employees with their families, diversity cooking, a children’s clothing flea market, and networking meetings, etc. (all temporarily limited due to the COVID-19 pandemic), the Management Board promotes a working culture that enables employees to combine personal obligations, such as childcare or caring for individuals in need of assistance or care, with their professional obligations, and by offering these family-friendly working conditions the Company is able to attract new colleagues from around the world.

3.5.4 Equal pay for equal work

a) Principle

The management shall ensure the payment of remuneration for employees that corresponds to the relevant applicable collective agreements and legal provisions, and ensure that women and men receive equal pay for equal work in the Company, and also ensure, when awarding contracts to provide

services, that the respective service provider complies with the relevant applicable collective agreements and legal provisions on the remuneration of employees, by means of appropriate measures, in particular through contractual arrangements (Sec. 5.5.4 PCGC).

b) Implementation (+)

The Company's employees receive salaries and benefits similar to those of the collective agreement for public service organizations in Germany (TVöD). These salaries and benefits are provided in a non-discriminatory manner, without any distinction according to gender, and following the principle of "equal pay for equal work". The management strives to ensure that its service providers comply also with their relevant applicable collective agreements and legal provisions on the remuneration of their employees. Corresponding clauses are included in the Company's standardized tender documents (namely in the so-called "self-declaration of tenderers on the non-existence of grounds for exclusion", the optional ground for exclusion of the breach of "obligations under labour law").

3.5.5 Works council

a) Principle

If the Company operates in various EU member states or if it belongs to a group that has companies in various member states and the conditions of the German Act on European Works Councils (*Gesetz über Europäische Betriebsräte*) are fulfilled with regard to the establishment of a European works council, the management shall actively support the establishment of a European works council and shall swiftly conclude an agreement on informing and consulting employees on a cross-border basis with the workforce's special negotiating body (Sec. 5.5.5 PCGC).

b) Implementation (+)

With much fewer than 1 000 employees working basically all at its research campus in Schenefeld, Germany, the German Act on European Works Councils (*Gesetz über Europäische Betriebsräte*) and, therefore, also the recommendation of Sec. 5.5.5 PCGC is not applicable to the Company.

Nevertheless, the legitimate interests of its employees are duly preserved by a works council subject to German law.

3.5.6 No aggressive tax avoidance or tax reduction measures

a) Principle

The management shall ensure that the Company refrains from engaging in aggressive tax avoidance or tax reduction measures and strategies (Sec. 5.5.6 PCGC).

b) Implementation (+)

The Management Board refrains from engaging in aggressive tax avoidance or tax reduction measures and strategies. Significant doubtful tax issues are regularly reconciled with the tax authorities via the instrument of “binding ruling” (*verbindliche Auskunft*).

4 Supervisory Body / Council

4.1 Tasks and competences

4.1.1 AoA including a supervisory body in terms of “*Aufsichtsrat*”

a) Principle

The Company’s articles of association shall set out the requirement to have a supervisory body in terms of an “*Aufsichtsrat*” (Sec. 6.1.1 para. 1 PCGC).

b) Implementation (-, but justified)

In accordance with the statutory judgement of Sec. 1 para. 2 no. 2 lit. a of the German One-Third Participation Act (*Drittelbeteiligungsgesetz*) to grant privileges to so called “*Tendenzbetriebe*” like research facilities (due to their special characteristics) and due to its international orientation following well-

established governance structures¹⁸, the Company does not have a supervisory body in terms of a “*Aufsichtsrat*”. The typical tasks of an “*Aufsichtsrat*”, namely supervising, advising, and (re)appointing the management, are incumbent upon the Company’s shareholder’s meeting, i.e. the Council, which is supported by various specialized advisory bodies (AFC, SAC, and MAC) and Council sub-committees (SSC, IC, and NC; cf. no. V.3.2.2 above) preparing the final (re)appointment decisions to be taken by the Council. In contrast to the “*Aufsichtsrat*”, who typically consists of only a small group of at least three persons, it is the AFC, in which each Shareholder may appoint up to two own representatives, that offers—in a manner appropriate to the interests of internationally funded research infrastructures—all Shareholders the opportunity to directly supervise and advise the management in financial matters.

4.1.2 Fundamental decisions

a) Principle

The supervisory body shall be involved in decision by the management that are of fundamental importance to the Company. In particular, the supervisory body is responsible for the remuneration and employment of the Directors (Sec. 6.1.1 para. 3 and 4 PCGC).

b) Implementation (+)

The Council is responsible for all fundamental decisions of the Company and may issue any kind of instructions to the Management Board (Art. 11 para. 1 AoA, Art. 1.2 RoP-Council). In order to be able to fulfil its tasks, the Council is supported by the Management Board, among other things, by providing all necessary information (Art. 6.1 of the RoP-Management Board).

¹⁸ Also the European Synchrotron Radiation Facility (ESRF), a publicly funded international research facility subject to French private law, which is considered a best-practise example in many aspects, is very similar structured with a Council and its advisory bodies (AFC, SAC, and MAC), but without a separate supervisory body (cf. <https://www.esrf.fr/about/organisation/organisation-chart>)

Appointment, employment, and termination of the appointment of the Directors as well as any amendment or enlargement of their contracts of employment are subject to the approval by the Council (Art. 11 para. 3 lit. e, m; Art. 13 para. 3 AoA).

4.1.3 Rules of procedure

a) Principle

The supervisory shall issue itself with rules of procedure (Sec. 6.1.2 PCGC).

b) Implementation (+)

As mentioned before, the Council has itself issued rules of procedure (RoP-Council).

4.1.4 Chair

a) Principle

The chair of the supervisory body shall conduct meetings and remain in regular contact with the management to discuss Company matters. The chair shall not be granted the right to make decisions alone on behalf of the supervisory body. The chair shall be a member of the committee that deals with Director's contracts, if such a committee has been established (Sec. 6.1.3, 6.1.4 PCGC).

b) Implementation (+)

The Council Chair, and in his/her absence the Vice-Chair, conducts Council meetings and ensure the observance of the RoP-Council (Art. 5 RoP-Council). They are super partes and have no right to vote (Art. 4.1 RoP-Council). Even outside Council meetings, they regularly exchange ideas with the Management Board about all important Company issues. The Chair(s) lead(s) the Council subcommittees responsible for the search and selection of (new) Directors, negotiation of Directors' employment contracts, and the negotiation and later assessment of Directors' target agreements (no. 3.1, 3.2, and 6.1 of the "*Guidelines for selection and appointment of Directors*"; no. 6 of the "*Procedure for performance-based pay of Directors*").

4.1.5 Advisory committees

a) Principle

Depending on the number of its members and on the specific economic circumstances of the Company, the supervisory body shall establish expert committees to deal with complex technical and/or financial issues, in particular an audit committee that is to focus on issues of financial accounting and risk management (Sec. 6.1.5, 6.1.6 para. 1 PCGC).

The Chair of the supervisory body shall not simultaneously hold the chair of the audit committee. A member of the audit committee shall not have been a Director during the five years preceding their appointment to the audit committee (Sec. 6.1.6 para. 3 PCGC).

The committees may issue recommendation for a decision but not definitely completing a task (Sec. 6.1.7 PCGC).

Committees in supervisory bodies that are subject to statutory codetermination shall be composed in such a way that the composition of the supervisory board's plenary, in terms of the power relations between shareholders' representatives and employees' representatives, is also reflected in the respective committees as well (Sec. 6.1.8 PCGC).

b) Implementation (+)

The Council established three committees—the AFC (established via Art. 13 para. 3 lit. f AoA at its 4th meeting on 11 May 2010), the SAC (Art. 16 AoA), and the MAC (Art. 17 AoA)—providing advice in their specific fields of expertise towards the Council and the Management Board without taking their own decisions. None of the Chairs have ever been Chair of one of the other committees. No Director ever became a member of the Council or its advisory committees.

As the Council is not subject to statutory codetermination (cf. Sec. 1 para. 2 no. 2 lit. a of the German One-Third Participation Act – *Drittelbeteiligungsgesetz*), the recommendation of Sec. 6.1.8 PCGC does not apply for its advisory committees.

4.1.6 Review

a) Principle

The supervisory body, including its committees, shall regularly review the overall quality and efficiency of the supervisory body's activities. The supervisory body shall monitor the implementation of the measures it has adopted in this respect (Sec. 6.1.9 PCGC).

b) Implementation (+)

The last self-appraisal of the quality and efficiency of its activities took place during the 2nd informal Council meeting on 15 February 2018. The resulting improvement ideas were transferred to an update of the RoP-Council, which was finally approved by the Council at its 29th meeting on 27–28 June 2019.

4.2 Composition

4.2.1 Members

a) Principle

No one shall be a member of the supervisory body who has either a business or a personal relationship with the Company or its management that constitutes a conflict of interest or who holds any representative supervisory position for a competitor of the Company (Sec. 6.2.1 PCGC).

b) Implementation (-, but justified)

Several shareholding institutes, which in some way or another scientifically compete with the Company's Facility, are represented by their delegates in the Council. On the other hand, given the way international scientific projects such as the European XFEL are usually structured, this is unavoidable and certainly not comparable to a participation of competitors in the supervisory body, e.g. of a stock company (*Aktiengesellschaft*).

4.2.2 Age limit

a) Principle

An appropriate age limit which complies with the statutory requirements shall be defined for members of the supervisory body (Sec 6.2.2 PCGC).

b) Implementation (-, but justified)

Neither the AoA nor the RoP-Council do foresee an age limit for Council members, who are appointed by the respective Company's shareholders. But, in fact, the Council currently complies to the greatest extent with statutory age limits.

4.2.3 In person

a) Principle

The members of the supervisory body shall carry out their duties in person; they may not have others perform their tasks for them (Sec 6.2.3 PCGC).

b) Implementation (+)

Council members usually observe their duties in person. In case they are unable to attend a meeting due to other (business) obligations, they are represented only by someone who has also been officially nominated as Council delegate by the respective shareholder.

4.2.4 No former Directors

a) Principle

Former Directors shall not move to the supervisory body before the expiry of five years since their management duties ended (Sec 6.2.4 PCGC).

b) Implementation (+)

No former Director ever assumes any function in the Council or its advisory committees.

4.3 Remuneration

a) Principle

The remuneration paid to the members of the supervisory body shall be determined in the Company's articles of association/bylaws or by a resolution of the supervisory body (Sec. 6.3 PCGC).

b) Implementation (+)

Except for the Chairs, no Council member receive any payments from the Company for his/her activities in the Council. For the Chairs, travel (basically airfare economy and train fare second class; if justified, taxi, local transports, parking, gasoline, toll fees) and accommodation costs (based on the German Federal laws for travel expenses – *Bundesreisekostengesetz*) are reimbursable, as well as a daily allowance of 60 €/day (pure travel days excluded) as a lump sum to cover additional living expenses while working abroad is offered (no. 3.2, 3.4.1.1 of the Company's SN "*Company guests and visitors*"). As all these payments shall compensate only those costs incurred in the course of Chair's activities, they are not considered remuneration in terms of Sec. 6.3 PCGC.

4.4 Conflict of interest

4.4.1 Acting in Company's interest

a) Principle

Every member of the supervisory body is obliged to act in the Company's interest, which is, in particular, determined by the Company purpose and the Company objective. No member of the supervisory body may pursue personal interests when taking decisions nor may any member exploit for themselves business opportunities to which the Company is entitled (Sec. 6.4.1 PCGC).

b) Implementation (+)

The Company's shareholders and its representatives in the Council are subject to allegiance (*Treuepflicht*), one of the basic principles of the German Limited Liability Companies Act (*GmbH-Gesetz*), which binds them to the Company's objectives and prohibits them from exploiting business opportunities due to the Company for their own benefit.

4.4.2 Cooling-off period

a) Principle

The Company shall not conclude consultancy or other service agreements or work contracts with a member of the supervisory body during the period that the member holds the position or for a period of 24 months after their mandate has ended (Sec. 6.4.2 PCGC).

b) Implementation (+)

No consultancy or other service agreement or work contract exists between the Company and a current Council member or a former Council member who left the Council during the last 24 months.

4.5 Meetings

a) Principle

The supervisory body shall meet regularly, once every calendar quarter. In the case of companies that receive institutional assistance, the supervisory body can agree to meet on a less regular basis, with two or three meetings per business year, provided this does not affect the proper supervision of the management.

Minutes of the meeting of the supervisory body shall be kept. The minutes shall include the key details and the decisions. Decisions that the supervisory body makes outside a meeting shall be recorded in the minutes of the supervisory body's next meeting (Sec. 6.5 PCGC).

b) Implementation (+)

The Company is publicly funded via shareholders' contributions similar to institutional assistance. According to Art. 10 para. 1 AoA, its Council shall formally meet at least twice a year. In addition, informal Council retreats should take place once a year (Art. 16.1 RoP-Council). Each formal Council meeting is complemented by a meeting of its advisory committee (AFC, MAC, SAC), which reports back to the Council. During the COVID-19 pandemic, some of these meetings took place virtually or in a hybrid mode.

For each formal Council meeting, a summary of decisions and minutes reflecting the substance of the discussions are prepared (Art. 15 RoP-Council). They also include Council decisions that were taken before that meeting by written procedure (Art. 14.5 RoP-Council).

5 Transparency

5.1 Declaration of compliance and public corporate governance report

a) Principle

A report on the corporate governance of the Company shall be issued annually. In particular, the report shall state that the recommendations of the PCGC were and are being complied with, and indicate which recommendations were or are not being complied with and why (declaration of compliance). Any deviations from the recommendations shall be explained and justified in the report. The declaration of compliance and the report shall be published on the Company's website for at least five business years.

The report shall also include a brief description of the measures outlined in Sec. 5.5.1 to 5.5.3 PCGC, including a statement on the Company's sustainability activities and a description of the trend in the proportion of

women in management positions in the management and in the two management levels below this, as well as in the supervisory body (Sec. 7.1 PCGC).

b) Implementation (+)

With the present report (including its declaration of compliance, see no. III above), the Company complies with the transparency obligations of Sec. 7.1 PCGC. It will be published on the Company's website¹⁹ for at least five years. A brief description of the measures outlined in Sec. 5.5 PCGC is given above under no. V.3.5 of this report. For a description of the trend in the proportion of women in management positions, see no. V.5.4 below.

5.2 Information on the remuneration of the Directors and the supervisory body

5.2.1 Remuneration of Directors

a) Principle

The remuneration for each Director shall be set out clearly and comprehensible in the Company's public corporate governance report, individualized for each Director, and specifying the Director's name, citing the component that is independent of performance, the performance-based component of the remuneration, and the components having a long-term incentive effect (Sec. 7.2.1 PCGC).

b) Implementation (-, but justified)

Although all Directors are willing (and contractually obliged) to disclose their remuneration, it was agreed with the Council to deviate from the

¹⁹ Cf. https://www.xfel.eu/organization/company/index_eng.html

recommendation of Sec. 7.2.1 PCGC, as such a detailed publication could have undesirable effects, e.g. when negotiating, within a highly competitive international setting, the remuneration with future Management Board members.

5.2.2 Remuneration of members of the supervisory body

a) Principle

The remuneration for each member of the supervisory body shall be set out in the Company's public corporate governance report in a form understandable individualized for each member, and broken down according to components (Sec. 7.2.2 PCGC).

b) Implementation (+)

As outlined above (no. V.4.3), no Council member receives remuneration by the Company for his/her respective activities.

5.3 Publications

a) Principle

Company information, including this report, the annual financial statement with its annex as well as the management report, shall be published by the Company and be accessible on the Company's website for at least five years following their publication (Sec. 7.3 PCGC).

b) Implementation (+)

Starting with the implementation of the revised PCGC in 2021²⁰, the Company will store its (science-oriented) Annual Reports, annual financial statements

²⁰ Before, the Company applied the meanwhile outdated PCGC only internally. Consequently, all of its previous annual financial statements (incl. annex and management report), as well as its public corporate governance reports, are stored internally. In addition, the annual financial

(incl. annex and management report), and its public corporate governance reports for at least five years on its website²¹.

5.4 Information about women in management positions

As foreseen by Sec. 7.1 PCGC, the trend of women in management positions in the Management Board and in the two management levels below this, as well as in the Council, is summarized as follows.

5.4.1 Proportion of women in the Council

By the end of 2021, the Council was chaired by one female and one male (female share at 50%). By the end of 2022, this share decreased to 0%, as both Council Chair positions are filled with males. By the end of 2021, 4 out of 22 Council delegates/observers were female²². By the end of 2022, 4 out of 23 Council delegates/observers were female²³, which leads to a slight decrease of female share from 18.18% to 17.39%.

5.4.2 Proportion of women in the Management Board

During 2021 and 2022, the number of female Directors remained unchanged at 2 (out of 5 in total)²⁴, resulting in a stable female share of 40%.

statements are publicly available via the *Bundesanzeiger* (see www.bundesanzeiger.de). Furthermore, all of its (science-oriented) Annual Reports are publicly available on the Company website (see https://www.xfel.eu/news_and_events/flyers_and_brochures/index_eng.html)

²¹ The annual financial statements (incl. annex and management report) are attached to the respective public corporate governance reports available under https://www.xfel.eu/organization/company/index_eng.html

²² Annual Report 2021, p. 100.

²³ Annual Report 2022, pp. 96-97.

²⁴ Annual Report 2021, p. 101, and Annual Report 2022, p. 98.

5.4.3 Proportion of women at first and second level management

In 2021, 9 out of 57 positions at the Company's first and second level management, composed of distinguished advisor, department heads, Management Board assistants, group and team leaders, as well as staff functions, were female²⁵. In 2022, 10 out of 57 positions at the Company's first and second level management were female²⁶. Therefore, the female share from 15.78% in 2021 to 17.54% in 2022. An increase of the female share in leading positions is strived for by the Company.

6 Financial reporting and auditing

6.1 Financial reporting

a) Principle

The annual financial statements and the management reports are to be prepared in accordance with the provisions of third book of the German Commercial Code (*Handelsgesetzbuch* – HGB) for large corporations and shall be audited in line with these provisions, provided other, more extensive, legal provisions do not apply and there is no conflict with other legal provisions (Sec. 8.1.1 PCGC).

The annual financial statement as well as the management report are drawn up by the management and checked by the supervisory body with the auditor's report (Sec. 8.1.2 PCGC).

²⁵ Annual Report 2021, Org. Chart, p. 98.

²⁶ Annual Report 2022, Org. Chart, p. 94.

b) Implementation (+)

According to Art. 18 AoA, *“the Management Board must prepare the annual financial statement and the management report (“Lagebericht” in the sense of the GmbHG). The rules of the HGB regarding the preparation and audit of the annual financial statement and the management report for large-scale corporations shall apply mutatis mutandis. The annual financial statement and the management report must be verified by a certified independent auditor (“Abschlussprüfer” in the sense of the HGB). [...] [T]he Managing Directors must present to the Council a copy of the annual financial statement, the original of which must bear the legally binding signatures of the Managing Directors, as well as the management report together with the audit report (“Prüfungsbericht” in the sense of the HGB) including a written statement. The Council decides upon the adoption of the annual financial statement”.*

6.2 Audit of the annual financial statement

6.2.1 Appointment of auditor

a) Principle

The supervisory body shall decide on the selection and appointment of the auditor, following a recommendation by the audit committee (Sec. 8.2.1 PCGC).

b) Implementation (+)

According to Art. 18 para. 2 sent. 2 AoA, the (year-end) *“auditor shall be appointed by way of a resolution of the Council”*, always following a proposal by the Management Board subsequently evaluated by the AFC.

6.2.2 Tender process

a) Principle

The auditor shall be selected on the basis of a tender process. At least three tenders should be obtained, unless stricter requirements for the awarding of

contracts apply on the basis of statutory provisions, the articles of association, or other relevant rules (Sec. 8.2.2 PCGC).

b) Implementation (+)

According to Art. 26.1 of the Company's Financial Rules²⁷, the "*auditor shall be an appropriately qualified company selected after competitive tender*", which means a public procurement procedure according to German or European public procurement law, which the Company is obliged to apply.

6.2.3 Impartiality declaration

a) Principle

Before proposing an auditor, the supervisory body or the audit committee shall procure a declaration from the proposed auditor in which the auditor discloses his/her personal and business impartiality regarding the Company. The declaration shall also describe the scope of any other services that were provided to the Company in the preceding business year or that have been agreed for the following year. This declaration by the proposed auditor shall be filed with the business records (Sec. 8.2.3 PCGC).

b) Implementation (+)

In accordance with Sec. 321 para. 4a HGB, the auditor declared within the audit report 2022 its impartiality²⁸.

6.2.4 Information obligations

a) Principle

The auditor shall inform the supervisory body without delay about

²⁷ Last amended by the Council at its 8th meeting on 29–30 June 2011.

²⁸ Audit report 2022 (long form), p. 18 (Sec. 5.3 – "*Independence*").

- any reasons they might have to withdraw from the audit contract, or might not be able to act impartially, that arise during the audit, unless such reasons are remedied without delay,
- any findings that arise during the audit of the annual financial statement that are particularly relevant to the tasks of the supervisory body (these shall be mentioned in the audit report), and
- any facts that reveal inaccuracies in the management's and the supervisory body's declaration of compliance with the PCGC.

These information obligations shall be agreed with the auditor (Sec. 8.2.4 PCGC).

b) Implementation (+)

Within its audit report (issued usually in March), the auditor notes its audit findings including (but not limit to) those related to the topics listed in Sec. 8.2.4 PCGC, if any. Immediately after its translation into English, the audit report will be distributed to the AFC (usually mid-April) and subsequently to the Council (usually end of May).

6.2.5 Special audit content: German Budgetary Principles Act and PCGC compliance

a) Principle

The audit contract awarded to the auditor shall also cover the audit pursuant to Sec. 53 of the German Budgetary Principles Act (*Haushaltsgrundsätzegesetz*) and an inspection of whether the PCGC compliance declaration has been submitted and whether the corporate governance reports from the past five business years have been published on the Company's website. In addition, the contract shall specify particular areas of focus for the audit (Sec. 8.2.5 PCGC).

b) Implementation (+)

As part of its contractual duties, the Company's auditor always conducted and will also in future conduct an audit according to Sec. 53 of the German

Budgetary Principles Act (*Haushaltsgrundsätze-gesetz* - HGrG)²⁹. Following the adoption of the recommendation of Sec. 7.1 PCGC at the Company³⁰, the Company's auditor was also charged (as an integral part of its 2022 audit report³¹) with an inspection of whether the PCGC compliance declaration has been submitted and whether the corporate governance reports from the past five years have been published on the Company's website. At the beginning of each audit, particular areas of focus for the audit are specified³².

6.2.6 Meeting participation

a) Principle

The auditor shall attend the discussions of the supervisory body or the audit committee regarding the annual financial statement and report on the significant findings of their audit (Sec. 8.2.6 PCGC).

b) Implementation (+)

As part of its contractual duties, the Company's auditor presents at each spring meeting of the AFC and the Council the results and findings of their annual audit and is subsequently available for answering corresponding questions.

²⁹ Audit report 2022 (long form), p. 16 (Sec. 5.1 – “*Subject of the audit*”), p. 23 (Sec. 7 – “*Audit findings pursuant to Sec. 53 HGrG*”).

³⁰ Cf. Summary of Decisions of the 35th Council meeting, XFEL_Council_21-51, p. 16.

³¹ Audit report 2022 (long form), Annex 8 (“*List of questions for the audit pursuant to Sec. 53 HGrG*”), p. 9.

³² Audit report 2022 (long form), pp. 16 et seqq. (Sec. 5.2 – “*Nature and scope of the audit*”).

European X-Ray Free-Electron Laser Facility GmbH, Hamburg

Management report for the 2022 financial year

A. Situation of the Company

1. Legal form, shareholder structure

European XFEL GmbH is a non-profit limited liability company under German law. The Company was founded on 28 September 2009, initially with DESY as its sole shareholder.

As at 31 December 2022, the Company has the following thirteen shareholders:

- Deutsches Elektronen-Synchrotron (DESY), **Germany**
- Danish Agency for Higher Education and Science (DAFHES), **Denmark**
- Commissariat à l'énergie atomique et aux énergies alternatives (CEA), **France**
- Centre National de la Recherche Scientifique (CNRS), **France**
- United Kingdom Research and Innovation (UKRI), **United Kingdom**
- Istituto Nazionale di Fisica Nucleare (INFN), **Italy**
- Consiglio Nazionale delle Ricerche (CNR), **Italy**
- NCBJ Swierk, National Centre for Nuclear Research (Naradowe Centrum Badan Jadrowych), **Poland**
- National Research Center “Kurchatov Institute”, **Russia**
- Vetenskapsrådet (Swedish Research Council), **Sweden**
- Swiss Confederation, represented by the State Secretariat of Education, Research and Innovation, **Switzerland**
- Slovak Republic, represented by the Ministry of Education, Science, Research and Sports, **Slovakia**
- NKFI [Nemzeti Kutatási, Fejlesztési és Innovációs Hivatal, (National Research, Development and Innovation Office)], **Hungary**

The participation of Spain as a shareholder in European XFEL GmbH is planned.

2. Company activities

2.1 Profile

The purpose of European XFEL GmbH is to design, construct, operate and further develop the European X-ray Free-Electron Laser facility (European XFEL). Beginning in 2017 the research facility has been generating extremely intense X-ray laser flashes to be used by researchers from around the world for their research. These X-ray flashes are generated in a facility 3.4 kilometres in length, most of which is located underground. Three operating sites allow access to the tunnels and end stations.

The facility extends from the DESY site in Hamburg to the Schleswig-Holstein city of Schenefeld in the Pinneberg district. A research campus has been established there, at which international teams of scientists experiment with intense X-ray flashes.

In the tunnel between the Bahrenfeld and Osdorfer Born sites, a particle accelerator accelerates electrons nearly to the velocity of light. In a fan of tunnels built under the Schenefeld site, complex arrangements of magnets subsequently force particle bunches on a slalom course. This creates X-ray flashes directed by special optical facilities to end stations equipped with various instruments in the underground experiment hall in Schenefeld. These end stations are made available to selected research groups for the duration of their experiments, normally several days.

Usage time is assigned to research groups in a competitive process based on the criterion of scientific excellence. In addition, the Company intends to provide users from industry with access to the research facility for a fee in the long term.

Numerous partners provide assistance in establishing the European XFEL. To this end, European XFEL GmbH cooperates closely with the DESY research centre and other international institutions.

2.2 Business activities in 2022

Fortunately, restrictions on user operations resulting from the pandemic have decreased in 2022, and European XFEL succeeded in addressing the significant implications of the COVID-19 pandemic stemming from the previous years and in offering more usage times than in prior years. Day-to-day business and user operations largely ran routinely again, especially in the latter half of the year, and European XFEL was once again able to fulfil its role of being an outstanding and unique laboratory opening up new fields of research in X-ray science and technology.

Although the direct danger posed by pandemic events related to COVID-19 has abated, the task force established at the beginning of the pandemic remains in place in order to discuss organisational and operational issues related to the pandemic. One of the most important tasks the task force has set itself is the preparation of a long-term pandemic and crisis plan that incorporates the extensive experience gained during the pandemic. This makes the plan an important component of the Company's strategies for dealing with crises in the future, enabling it to minimize additional or new risks for the long term.

Among the highlights of the year was the celebration of five years of successful user operations. Unfortunately, however, this positive event was accompanied by further crises confronting European XFEL with great challenges. In the aftermath of the COVID-19 pandemic, warlike operations breaking out on the national territory of Ukraine have led to a great geopolitical crisis with tragic consequences for innocent people in Europe that has shaken European XFEL, too. Additionally, the high rate of inflation and rising energy costs represent risks to the economy and the world of finance, and hence, of course, to European XFEL in particular as well.

The Managing Directors are certain that with everyone involved collaborating and acting decisively and prudently, these challenges can be addressed successfully and judiciously.

The significant events in the Company's business activities in 2022 that should be highlighted are the following:

Despite the difficulties referred to above, the user program was in full swing and many users were on location once again; exciting scientific results were generated that deal with four great challenges faced by society: climate and energy, environment and sustainability, health as well as digitization. New access modes were introduced with a highly successful themed user session on water research. The Company plans to establish additional limited-time themed user programmes with continued strong support for research focusing on global challenges.

Experimental capabilities were expanded by commissioning the new open port at SASE 3 for soft x-rays and by obtaining the recent approval of a further new instrument for hard x-ray scattering. Similarly, the accelerator complex has also developed well, receiving new and exciting technological additions.

The Company has re-adjusted its strategy processes and set clear priorities that utilize the unique characteristics of the European XFEL: full development and use of self-seeding, superconducting undulator, the new instrument for hard x-ray scattering, a new generation of pixel detectors and preparations for adding SASE 4 and 5. The strategy development process is scheduled to be completed with a detailed report and slated to be presented to the Council in 2023. European XFEL scientists are looking forward to the coming years that will hopefully be especially marked by outstanding scientific results and the prospect of successfully and competitively enhancing the institution.

When it comes to personnel matters, it is important to mention that both the chair and the deputy chair of the Council, previously Maria Faury (France) and Professor Martin Meedom-Nielsen (Denmark), have changed. The new chair is Professor Federico Boscherini from the University of Bologna, Italy. He is assisted by his deputy, Professor James Naismith from the United Kingdom. The chair of the Administration and Finance Committee (AFC), Sabine Carl (Germany), was re-elected for a second term of office, and the Company is very grateful that Maja Hellsing (Sweden) is available to act as the new deputy AFC chair starting in 2023. There is also very good news regarding the management of European XFEL: The contract with administrative director and Managing Director Dr. Nicole Elleuche was renewed until March 2028.

2.3 Financing

The Company's operation expenses and capital expenditures are predominantly financed by resources provided by the shareholders listed above. Shareholder contributions to the construction budget – largely consisting of non-monetary contributions such as labour and in-kind contributions by shareholders and partners – were recognized directly in the capital reserve without affecting the income statement. Grants related to operations have been recognized as income since mid-2017.

European XFEL's operation expenses have increased each year since the start of the operation phase in July 2017. A significant portion of the budget relates to DESY's operation expenses; DESY runs the technical operation of the accelerator.

2.4 Capital expenditures and construction of the X-Ray Free-Electron Laser Facility

Construction activities on the European XFEL campus continued with the construction of the undulator hall and the start of construction of the visitor centre.

At EUR 20.9 million, capital expenditures for new equipment decreased from the prior year in 2022. Assets commissioned included the ERP system and specialised equipment such as the equipment of the new open port discussed above.

2.5 Personnel

As at 31 December 2022, the Company employed 466 staff members (432 FTE). This represents an increase of 6.8% in comparison to the prior year. In addition, 100 employees from other institutions were working for the Company as guests at the end of 2022.

At 42.0%, scientists comprised the largest group of employees, followed by engineers at 29.0%, administrative staff (17.4%), and technicians and skilled workers (11.6%). The Company had 55.2% international employees. The proportion of international scientists was 71.2%. Along with further expanding the Company's workforce, the integration of new employees and, if necessary, also their families into the new environment is an important task.

It is important to emphasize that utilisation of the new experimental capabilities and the scientific programme requires successfully educating the next generation of scientists – something that European XFEL supports with the strong postgraduate programme it operates in cooperation with a number of European universities and which attracts a diverse student body. Both the long-term development of internal staff and the attractiveness of European XFEL for international technical and administrative personnel play another key role. Similarly, a particular focus is currently on recruiting engineers, whose qualifications differ widely across European countries. This group of professionals is especially needed when it comes to technical enhancements to the facility. Finding suitable staff in this area is currently challenging.

3. Research and development

European XFEL was established as a unique research facility located in the Hamburg metropolitan area. This X-ray laser facility will open up completely new fields of research. It will allow researchers to identify the atomic details of viruses, to film chemical reactions and to analyse processes under the same conditions as those existing in the interior of planets. It is the objective of the facility to generate new knowledge in the fields of medicine, pharmacy, chemistry, physics, materials science, nanotechnology, energy technology and electronics, which will lead to the development of concrete products and to product improvements.

At European XFEL, international research groups are able to use complex instruments to perform their experiments for several days or weeks under the user programme. Even before the facility was commissioned, scientific knowledge was gained during construction of the facility. This is particularly true for the work on developing the superconducting linear accelerator, the undulators, the X-ray optics and the instruments with new types of detectors. Additionally, however, there is an important internal research and development programme that helps strategically advance both scientific questions and technological developments with internal resources.

The current annual research and development budget for 2022 amounts to EUR 11.8 million. Given the uncertain overall financial situation due to high inflation and increased energy prices, a decision was made to allocate fewer funds directly to new projects in 2022 but to reserve a higher amount for potentially extending agreements and projects that were delayed by the pandemic and to offset higher project expenses. This strategy proved sensible, and the research and development programme was executed with a balanced mix of ongoing and new projects as planned.

4. Net assets, financial position and results of operations

Macroeconomic environment/sector trends

European XFEL GmbH is financed by a total of 13 European shareholders with Germany, the largest shareholder, holding 57% of the shares.

A look at the economy of Germany, the largest shareholder, shows that the German economy developed robustly in 2022 despite the energy crisis and supply chain issues, its gross domestic product growing by 1.9% in 2022.

For 2022, the persistent geopolitical crisis and especially the war in Ukraine have rendered forecasts highly uncertain, making it difficult to estimate how the economy will develop in the near future. Governments, international organisations and economic researchers regularly try to forecast as exactly as possible the economic trend using various assumptions. Such forecasts serve as the basis for estimating and planning the Company's budget.

It is currently not possible to assess what further implications warlike operations breaking out on the national territory of Ukraine and sanctions imposed on Russia will have for (global) economic development. To date, the Company's second largest shareholder, the Russian Kurchatov Institute (26%), has met its obligation to pay the agreed shareholder contributions and grants. As a result of EU sanctions – which European XFEL consistently checks, puts into practice, and implements all updates for – any users affiliated with Russian institutions are denied access to experiments. The implications of EU sanctions and the recent termination of joint projects are clearly noticeable in other areas as well. Nevertheless, the Company, too, meets its contractual obligations to all of its 13 shareholders, and Council meetings continue to be held without restrictions and key decisions are still submitted to the shareholders for voting.

Fixed assets

Fixed assets declined by EUR 57.4 million in 2022 since the construction of additional buildings on the campus was more than offset by EUR 78.2 million in amortisation and depreciation. At EUR 948.6 million, fixed assets represent about 82.9% of total assets.

Current assets

Current assets amounted to EUR 195.5 million and included EUR 184.5 million in liquid funds, EUR 5.9 million in inventories and EUR 5.1 million in receivables from shareholders and other assets mainly consisting of VAT input tax credit claims. Thus, liquid funds represent 94.4% of current assets. These funds will largely be expended on capital expenditures and operation expenses planned for 2023.

In addition, the Company also plans to use the liquid funds on hand for expenditures for specific projects funded by third parties and user consortia, some of which will be incurred in subsequent years.

Shareholders' equity

Share capital of EUR 25 thousand has been fully paid up. Shareholder contributions to the construction of the facility over and above share capital have been recognised in the capital reserve.

Shareholders' equity net of accumulated deficit amounted to EUR 928.9 million as at the 2022 reporting date. The resulting equity ratio amounted to 81.2% of total assets, a slight decrease from the previous year.

Including the special reserves for grants (EUR 169.3 million), the equity ratio amounts to 96.0%. Special reserves for grants comprise financing contributions received from user consortia, current and future shareholders and other third-party funding sources and used for investing purposes, presented as grants to finance fixed assets. Special reserves also include grants for the operation budget that can be carried forward to the following year.

Liabilities

Total liabilities (defined as the total of provisions, payables and deferred income) amount to EUR 46.5 million and consist primarily of accounts payable to shareholders and partly represent trade accounts payable for which some invoices have not yet been received or were not yet due at the balance sheet date, including amounts from prior years.

Other liabilities comprise prepayments from third parties and user consortia, EUR 1.6 million of which have not yet been utilised.

The debt ratio amounts to 4.0%.

Net assets and financial position

The Company is almost entirely financed by equity, leading to very good coverage ratios. Comparing European XFEL GmbH's fixed assets (EUR 948.6 million) to shareholders' equity of currently EUR 928.9 million shows an excess coverage of fixed assets of EUR 19.7 million.

Current liabilities of EUR 46.5 million are covered by liquid funds of EUR 184.5 million. The financial position as at the reporting date 31 December 2022 can be described as very good.

Financial performance indicators

Financial performance indicators mainly comprise the asset coverage ratio and working capital.

The asset coverage ratio amounts to 97.9%. Fixed assets are fully covered by long-term funding. The long-term forecast continues to be based on favourable development.

As at the reporting date, working capital amounts to EUR 156.9 million (prior year: EUR 132.1 million), i.e. this is the amount of the surplus remaining once current liabilities have been settled using current assets.

Non-financial performance indicators

Non-financial performance indicators mainly comprise capacity utilisation of the operational X-ray laser facility, quality of beamtime delivered, a reduction in downtime and the level of the qualifications of the European XFEL and of the Company's staff.

Pandemic-related restrictions affecting the facility were almost entirely eliminated in 2022, as the Company was better able to adapt to the changed operating conditions and successful vaccination campaigns resulted in considerably fewer cases of critical illness. For the first time, more than 8,050 hours of operating time were made available to users – a great success for the Company. This has brought the objective of delivering 10,500 hours per year into close reach and it can hopefully be met within the next two years. The overall success rate of experiments has increased considerably as well; this demonstrates that both operation of the facility and user operations, with all the challenges inherent in preparing for and performing experiments, including complex additional technical installations, are running very smoothly overall.

Usage time for individual end stations is assigned to research groups in a competitive process based on the criterion of scientific excellence. Due to the high level of interest in the facility on the part of scientific users, demand significantly exceeds the available capacity. In addition, the Company plans to provide industrial users with access to the research facility for a fee in the long term. Depending on the instrument, beamtime for user groups is oversubscribed by 60-80% (in terms of the number of applications submitted), clearly demonstrating the interest shown by the international scientific community.

To position itself as an attractive employer, the Company emphasises the wide range of diverse prospects for employment in one of the world's leading facilities in this field of research. Thus the Company has, to date, succeeded in recruiting internationally renowned scientists as well as highly qualified technical and administrative personnel.

Results of operations

The agreed grants towards the operation budget are presented as income from grants. In 2022, these grants financed not only operation expenses but also EUR 10.1 million in capital expenditures. A further EUR 113.6 million in funds can be carried forward to the following year. Special reserves were set up for these purposes.

Amortisation and depreciation of EUR 78.2 million increased only slightly since no significant further facilities or buildings were commissioned. Amortisation and depreciation is offset by income from the amortisation of the special reserve for investment grants to only a small extent; this adversely affects earnings for the year to a significant degree and regularly results in a net loss for the year.

The number of employees has increased, and personnel expense has increased by 9.4% (2022: EUR 39.9 million, prior year: EUR 36.4 million).

Materials expense increased from EUR 58.5 million to EUR 62.7 million and includes expenses for services purchased from DESY and electricity costs. Other operating expenses rose by EUR 0.9 million during the year.

As in previous years, the Managing Directors will propose to the Council that the net loss for the current year be offset by a withdrawal from the capital reserve.

B. Report on opportunities and risks

Risk management

In the area of risk management, the administrative groups were successfully reflected in corporate risk management. Risk management was established for projects that are not directly part of facility operations.

Financial aspects and budget risks play an increasingly important role in analysing and discussing potential risks. Trends and developments with a significant financial impact are captured and analysed within existing reports in order to forecast and report on their implications for the budget. The Facility Development Programme, an instrument first used in 2020, plays a key role here. This instrument enables European XFEL to budget for capital expenditures and strategic trends and developments far in advance and to establish any necessary reserves. These reserves could then, in exceptional cases, be redesignated in consultation with the shareholders and used to cover other financial risks instead of for strategic measures.

The completion of the implementation as well as the ongoing enhancement of an enterprise resource planning (ERP) system at European XFEL represent another significant risk and quality management measure.

The project was delayed, mainly due to the pandemic, and the first instance - including several key modules for procurement, finance, controlling, logistics and inventory replacing various existing tools - was rolled out in 2022. The ERP system has since been commissioned and is working at full speed. The migration has also been completed successfully. However, a few process and system improvements were identified once the system was running, and these are scheduled to be implemented by mid-2023.

The main objectives of this project were to improve and expand the range of services offered by the administrative areas and to make administrative processes more efficient and productive; this includes minimizing financial risks in a targeted manner by extensively using numerous interfaces in administration, primarily in finance and controlling, purchasing, warehouse and logistics as well as human resources (the relevant human resource management tools are scheduled to be added in 2023). The ERP system will reduce errors resulting from working with potentially diverging data from different sources and result in a considerable improvement over the previous situation.

The concept of well-synchronized risk management and asset management was successfully implemented at European XFEL in 2022 as well. This means that the full reporting cycle of an entire risk reporting period was completed jointly with asset management for the first time. The asset management system and the risk reporting cycle were synchronized to utilize synergies between the two.

The main asset management software was connected to the ERP. Two interfaces were implemented as part of the ERP introduction in 2022. Both the inventory and the finance module now offer an interface to the European XFEL Inventory Manager software.

The tools in both areas were constantly supported and upgraded in order to keep up with changing and growing user needs.

Financing risks

The operation budget was based on the results of a Council working group which had reviewed, in 2018 and 2019, a need for approximately EUR 16 million in additional funds. Following a critical analysis, the operation budget was revised to ensure financing for the facility including service-oriented user operations on a long-term basis.

An operation budget totalling EUR 145.7 million (including the share to be financed by Spain) has been approved for 2023.

Currently, any potential impact on the operation budget of EU sanctions against the shareholder Russia or of any payments by other shareholders potentially remaining outstanding is not actively reflected in the budget, but could be addressed as part of other risk management activities. Preparation of the budget, especially designating Facility Development Programme funds, indirectly anticipates the risks described above.

With respect to adequate funding, which is currently being discussed at many large European research institutions due to extensive price increases in various areas, European XFEL is in the favourable position of having a financial reserve at its disposal to address any potential problems related to, for instance, the high cost of energy, without having to increase shareholder contributions.

Regardless of the financing risks nevertheless arising from increasing operation expenses, European XFEL is additionally exposed to the challenges brought on by the political situation in Ukraine and in Russia. With respect to these risks, the Company cannot rule out the possibility that public expenditures in its shareholders' countries may be re-reviewed and possibly reprioritised, which could lead to delays in payment or to defaults. Being a scientific user facility, European XFEL will certainly be among the facilities continuing to offer their services and actively supporting the scientific community here. The restrictions on user operations during the coronavirus pandemic have demonstrated that European XFEL GmbH has to develop a good strategy for, on one hand, redefining its objectives in the field of fundamental research and more closely addressing the current developments and, on the other, preparing a sustainable expenditure plan that allows for strategic adjustments to be able to compensate for potential defaults on contributions under the operation budget.

This is currently being discussed extensively with the shareholders who have to clearly state their objectives and capabilities for the future here. All shareholders participated actively in these discussions and have, in 2022, repeatedly emphasized their long-term support for the Company and their interest in the scientific capabilities of the facility.

The Spanish government has officially confirmed that Spain plans to become a shareholder of European XFEL GmbH. Spain has made all prerequisite payments for joining the Company as a shareholder. However, the prerequisite payments having been made, further administrative steps are still outstanding, such as ratification of the accession protocol by all other shareholder countries.

Liquidity for 2023 is assured since all shareholders have paid their grants for 2022 operations in full except for EUR 1.3 million and financial reserves have been built up.

Tax risks

In recent years the tax authorities have critically reviewed the commercial status of various well-known research institutions and their ability to claim VAT input tax credits with the result that such claims have partially been rejected. In light of the approach taken by the tax authorities vis à vis other research institutions, the Company cannot rule out the possibility that the tax authorities may change their current treatment prospectively, and possibly also retrospectively, resulting in VAT charges for European XFEL GmbH.

The Hamburg tax authorities has issued a binding ruling for the years up to 2017 confirming European XFEL GmbH's right to full VAT input tax credit claims. Another binding ruling by the tax authorities ensured that the Company has been able to continue to claim the majority of its VAT input tax credits since 1 January 2018. The resulting additional expenditures of approximately EUR 1 million per year compared to the original right to full VAT input tax credit claims are financed by the German shareholder.

A special VAT audit commenced in 2022 has not yet been completed and has not resulted in any findings by the date of this management report.

Expenditure risks

Regarding the uncertain political situation in Russia, the Company perceives additional expenditure risks in various areas that have significant implications. Along with the cost of energy, which is rising at a disproportionately high rate, important raw materials such as helium and certain IT components are affected by potential cost increases as well. European XFEL is actively addressing this by developing various scenarios for optimising expenditures and for potential savings. These were discussed extensively with the shareholders in 2022 and the impact on operations and on the scientific performance of the facility was analysed as well. However, these discussions have not yet been completed and will continue to significantly characterize the dialogue with the shareholders in 2023.

Bottlenecks on the supplier side and, if applicable, longer delivery periods could cause delays in the progress of the project and in operations, which in turn may hamper operations, thus adversely affecting the budget available. In order to secure supply, the Company is continuing to expand its partnerships with key suppliers and to search for alternative sources of supply. The critical political situation in Ukraine and Russia poses a risk in this regard. In 2022, the Company succeeded in finding new partners and starting new collaborations that compensate for the impact EU sanctions are having on the cooperation with Russian institutions and companies.

The Company has identified alternative suppliers or manufacturers for critical technical equipment or special products. These new partnerships involve the risk of potential cost increases.

Expenditure risks inherent in the construction budget are limited to the buildings remaining to be constructed. Nevertheless, here, too, a particular focus is on the availability of certain raw and construction materials in order to mitigate expenditure risks. Wherever possible, materials have already been procured in 2022; they are currently in storage and will be used in construction in 2023.

Due to the unique nature of the facility, additional unplanned operation expenses may arise for maintenance, repairs and replacements.

User operations also include expenditure risks since the reduced user operations in recent years limit the Company's ability to evaluate whether planned service levels are sufficient to meet user requirements. This will emerge more clearly as the number of users increases and the financial impact of this expenditure risk can then be calculated more precisely. 2022 represents a good start in this regard and, in our view, reduces this risk to some extent, as user requirements and the service offered by the Company have been largely congruent.

Personnel

In the field of research, as elsewhere, there is intense competition between institutions for qualified personnel.

In order to place itself in an advantageous position, the Company is aiming to establish a highly attractive human resources management. Since its possibilities regarding monetary compensation are rather limited owing to public funding, employment with the Company is primarily made attractive by the diversity of prospects for employment at one of the world's leading facilities in this field of research.

The Company is mitigating risks of employee turnover by adequate substitution arrangements and timely succession planning.

C. Outlook

Following the commissioning of the final SASE in 2019, the Company plans to initially still make additional capital expenditures to construct buildings and minor additions to the facility. The commissioning of the open port added to SASE 3 and plans for expanding SASE 2 by adding a third instrument show the intensity with which European XFEL is approaching strategic advancement and its role as a scientific pioneer. The strategy development process will be completed in 2023 with a strategy design report that will contain new suggestions for significant technical advancements. These include primarily the new superconducting undulators, second generation detectors and technical upgrades for all instruments as a result of extensive evaluations currently being performed by expert commissions.

Following completion of all construction, a permanent workforce of approximately 350 full-time equivalents is planned for the operation phase. Additional staff members are employed on a temporary basis for research and development projects and for implementation tasks resulting from the construction activities. The size of the permanent workforce will stabilize in the coming years since the impact of the coronavirus pandemic currently remains clearly noticeable here.

For 2023, a net loss of approximately EUR 75 million is anticipated that will be attributable to amortisation and depreciation of fixed assets financed via the construction budget.

The potential implications of the Russian Federation's current war against Ukraine for European XFEL GmbH were analysed in detail to the extent possible and the further course of action was determined in close consultation with the shareholders. The Managing Directors are of the opinion that solutions have currently been found within the scope of what is possible that safeguard European XFEL's ability to act. This includes involving the Russian shareholder where legally possible or mandatory.

The current liquidity would also be sufficient to bridge any funding shortfall in 2024 that might result from shareholder grants potentially remaining outstanding or from disproportionately high price increases. A long-term solution will have to continue to be discussed jointly with the shareholders in order to secure the finances of European XFEL GmbH for the long term and to secure the bridge financing of any potentially outstanding contributions that is currently planned.

Hamburg, 31 March 2023
European X-Ray Free-Electron Laser Facility GmbH

Prof. Dr. Robert Feidenhans'l
Managing Director

Dr. Nicole Elleuche
Managing Director

Balance sheet of
European X-Ray Free-Electron Laser Facility GmbH, Hamburg,
as at 31 December 2022

A s s e t s	As at 31/12/2022	As at 31/12/2021
	EUR	EUR
A. Fixed assets		
I. Intangible assets		
1. Internally generated industrial rights and similar rights and assets	0.00	977,938.00
2. Purchased industrial rights and similar rights and assets as well as licences for such rights and assets	3,882,054.51	109,684.00
3. Payments on account	188,838.32	3,591,476.92
	4,070,892.83	4,679,098.92
II. Tangible assets		
1. Buildings on third-party land	88,715,082.79	92,275,353.00
2. Technical equipment and machinery	812,355,082.56	880,085,260.00
3. Other equipment, furniture and fixtures	3,163,309.58	3,845,973.28
4. Payments on account and assets under construction	40,267,924.12	25,135,843.01
	944,501,399.05	1,001,342,429.29
	948,572,291.88	1,006,021,528.21
B. Current assets		
I. Inventories		
1. Finished goods and merchandise	5,039,405.35	8,099,219.50
2. Payments on account	824,314.65	1,124,622.65
	5,863,720.00	9,223,842.15
II. Receivables and other assets		
1. Receivables from shareholders	1,342,345.00	2,078,845.02
2. Other assets	3,814,369.88	3,633,685.48
	5,156,714.88	5,712,530.50
III. Cash and cash equivalents		
	184,490,940.65	152,180,259.09
	195,511,375.53	167,116,631.74
C. Prepaid expenses		
	598,221.41	847,270.20
	1,144,681,888.82	1,173,985,430.15
	1,144,681,888.82	1,173,985,430.15

Shareholders' equity & liabilities	As at 31/12/2022	As at 31/12/2021
	EUR	EUR
A. Shareholders' equity		
I. Share capital	25,000.00	25,000.00
II. Capital reserve	1,000,317,784.96	1,068,687,055.50
III. Accumulated deficit	-71,409,726.96	-68,369,270.54
	928,933,058.00	1,000,342,784.96
B. Special reserves for grants		
1. Special reserve for investment grants related to fixed assets	55,670,594.28	39,903,498.44
2. Special reserve for unutilised operation expense grants	113,617,523.10	91,932,396.87
	169,288,117.38	131,835,895.31
C. Provisions		
Other provisions	6,277,290.43	5,181,680.18
D. Payables		
1. Trade accounts payable	4,113,157.72	3,636,513.48
2. Accounts payable to shareholders	31,836,618.59	15,417,626.75
3. Other liabilities	2,619,944.41	15,957,501.47
	38,569,720.72	35,011,641.70
E. Deferred income		
	1,613,702.29	1,613,428.00
	1,144,681,888.82	1,173,985,430.15

Income statement of
European X-Ray Free-Electron Laser Facility GmbH, Hamburg,
for the period from 1 January to 31 December 2022

	2022	2021
	EUR	EUR
1. Revenue	657,569.71	469,214.44
2. Income from grants from		
a) shareholders and third parties	123,344,158.32	115,297,894.91
b) third parties (project funding)	1,617,664.24	1,395,286.85
	<u>124,961,822.56</u>	<u>116,693,181.76</u>
3. Other own work capitalised	1,466,402.40	1,265,466.53
4. Other operating income	177,337.02	111,855.89
	<u>127,263,131.69</u>	<u>118,539,718.62</u>
5. Additions to special reserve for investment grants related to fixed assets	-10,060,101.37	-8,045,210.09
	<u>117,203,030.32</u>	<u>110,494,508.53</u>
6. Materials expense		
a) Raw materials, supplies and purchased merchandise	-23,942,157.61	-21,304,935.08
b) Purchased services	-38,762,823.02	-37,234,857.60
	<u>-62,704,980.63</u>	<u>-58,539,792.68</u>
7. Personnel expenses		
a) Wages and salaries	-32,374,042.54	-29,609,790.24
b) Social security and pension benefits	-7,475,396.53	-6,819,642.98
	<u>-39,849,439.07</u>	<u>-36,429,433.22</u>
8. Amortisation of intangible assets and depreciation of tangible assets	-78,220,136.19	-75,902,215.06
9. Income from amortisation of special reserve for investment grants related to fixed assets	6,002,504.07	5,477,657.82
	<u>-72,217,632.12</u>	<u>-70,424,557.24</u>
10. Other operating expenses	-14,279,388.41	-13,302,193.67
11. Other interest and similar income	598,709.10	12,765.78
12. Interest and similar expenses	-160,026.15	-180,568.04
	<u>-14,279,388.41</u>	<u>-13,302,193.67</u>
13. Earnings after tax / net loss for the year	<u>-71,409,726.96</u>	<u>-68,369,270.54</u>
14. Deficit brought forward	-68,369,270.54	-67,436,359.99
15. Withdrawals from capital reserve	68,369,270.54	67,436,359.99
16. Accumulated deficit	<u>-71,409,726.96</u>	<u>-68,369,270.54</u>

European X-Ray Free-Electron Laser Facility GmbH, Hamburg,

Notes to the financial statements for the 2022 financial year

A. General information and accounting policies

The Company is registered in the Commercial Register of the District Court of Hamburg under the number HRB 111165. The Company is domiciled in Hamburg.

The Company has applied the accounting and measurement requirements of the HGB applicable to large corporations. The balance sheet and the income statement have been extended in accordance with section 265 (5) and (6) HGB based on the accounting requirements for large German research institutions in order to reflect the special features of a non-profit research institution financed by grants. In addition, certain items were broken down into several separate line items.

The income statement has been prepared in the total expenditure format. Presentation, classification, recognition, and measurement in the financial statements are unchanged from the prior year.

For **internally generated intangible assets** included in fixed assets, the Company had exercised the option provided by section 248 HGB in prior years. As the internally generated software was amortised on a straight-line basis over its useful life of five years, it was fully amortised in 2022.

Purchased intangible assets are measured at acquisition or production cost less accumulated amortisation. They are amortised on a straight-line basis over their useful life.

Tangible assets are recognised at their acquisition or production cost required to be capitalised and, to the extent they are subject to wear and tear, less straight-line depreciation. In addition, appropriate portions of general administration expenses are included in the cost of tangible assets.

Assets whose parts are physically separable, are interrelated in terms of their use and function and are regularly replaced are depreciated using what is known as the component approach over the useful life of each individual component.

All additions are depreciated on a straight-line basis. Moveable low-value fixed assets subject to wear and tear with an acquisition cost of EUR 250 to EUR 800 are recognized as low-value assets and written off in the year of acquisition. Up to and including 2018, low-value movable fixed assets subject to wear and tear with an acquisition cost of EUR 150 to EUR 1,000 were recognised in a summary account and depreciated on a straight-line basis over a period of five years in accordance with section 6 (2a) of the German Income Tax Act [*Einkommensteuergesetz (EStG)*].

Inventories are reported at acquisition cost.

Receivables and other assets are recognised at acquisition cost (generally nominal value). All individual risks identified are reflected in their measurement.

In 2022, the Company continued to have longer-term agreements reducing deposit fee expenses for cash balances. The transactions have a volume of EUR 45,000 thousand, are presented within **cash and cash equivalents** and consist of a time deposit in USD in combination with a currency swap with the same maturity.

Special reserves pertain to grants received for fixed assets as well as to funds under the operation budget that can be carried forward to the following year. Investment grants related to fixed assets are comprised of grants from shareholders as well as third parties and funding received from user consortia. They are not deducted from the capitalised acquisition cost of the assets acquired but rather are presented as a special reserve for grants on the liabilities side of the balance sheet. The reserve is amortised each year in proportion to the depreciation on the fixed assets financed by the grants. As was the case in the prior year, a special reserve was set up during the year for funds received under the operation budget that can be carried forward to the following year; this reserve will be reversed as these funds are utilised the following year.

Other provisions reflect all known risks and uncertain obligations and are measured at the amount required to settle them, estimated based on careful commercial assessment.

Payables are accounted for at their settlement amounts.

Prepaid expenses and deferred income relate to payments made and received during the year that represent expenses and income, respectively, of a certain period after the balance sheet date.

B. Notes on the balance sheet and income statement

I. Balance sheet

1. Fixed assets

The separate schedule of movements in fixed asset is an integral part of the notes to the financial statements.

2. Current assets

Receivables from shareholders (EUR 1,342 thousand; prior year: EUR 2,079 thousand) consist entirely of payments due under the operation budget.

As in the prior year, all receivables and other assets are due within one year.

3. Capital reserve

In-kind contributions included in this balance are recognised at agreed-upon amounts based on 2005 price levels.

Monetary shareholder contributions are made based on agreed-upon cash contributions based on 2005 prices plus an indexing add-on calculated using the EUROSTAT Producer Price Index. Cash contributions are counted towards the relevant shareholder's required contributions based on the 2005 amount rather than the indexed amount.

The prior year's net loss for the year of EUR 68,369 thousand was offset by a withdrawal from the capital reserve in accordance with a Council resolution.

4. Provisions

Other provisions consist primarily of provisions for outstanding invoices (EUR 3,668 thousand) and EUR 2,472 thousand in personnel-related obligations.

5. Payables

Accounts payable to shareholders represent EUR 17,606 thousand (prior year: EUR 13,883 thousand) in trade accounts payable and EUR 14,230 thousand (prior year: EUR 1,535 thousand) in other liabilities.

All payables are due within one year. At the prior-year balance sheet date, other liabilities included payments in the amount of EUR 12,820 thousand previously received from a future shareholder that were expected to have a maturity of 1 to 5 years; during the year, these payments were used to finance construction costs and operation expenses and were reclassified to the special reserve and the income statement, respectively.

Other liabilities include taxes payable of EUR 379 thousand (prior year: EUR 507 thousand) and social security contributions payable of EUR 206 thousand (prior year: EUR 234 thousand).

II. Income statement

1. Revenue

The Company's revenue is entirely earned in Germany and is related to the research facility and operation of the guest house.

2. Income from grants

Income from grants of EUR 123,344 thousand (prior year: EUR 115,298 thousand) consist of grants from shareholders and third parties to cover ongoing operation expenses.

3. Pension expense

The line item "Social security and pension benefits" includes pension expense of EUR 1,896 thousand (prior year EUR 1,672 thousand).

C. Other disclosures

1. Personnel

Excluding the Managing Directors, the Company had an average of 418 employees in 2022 (prior year: 404), including an average of 60 part-time staff (prior year: 80).

2. Income/expenses related to prior years

As in the prior year, the Company did not have any significant income/expenses relating to other periods.

3. Other financial obligations

As at the balance sheet date, the Company has EUR 24,759 thousand in commitments to acquire tangible assets, expected to be due in 2023. In addition, other financial obligations stemming from the operation of the accelerator in 2023 amount to EUR 65,486 thousand.

4. Governing bodies of the Company

The Managing Directors are:

Prof. Dr. Robert Feidenhans'l, physicist, Schenefeld,
Dr. Nicole Elleuche, biologist, Hamburg.

The Company has waived disclosure of the remuneration of the Managing Directors in accordance with section 286 (4) HGB.

5. Fees for auditors' services

The auditors' fees for 2022 totalled EUR 29 thousand and included EUR 19 thousand for financial statement audit services and EUR 10 thousand for other assurance services rendered as part of EU project audits and an IT audit of the data migration.

6. Events after the reporting period

No significant events occurred after the reporting period that would require reporting on here.

D. Appropriation of earnings

The Managing Directors will propose to the Council that the full amount of the accumulated deficit be offset by a withdrawal from the capital reserve.

Hamburg, 31 March 2023

European X-Ray Free-Electron Laser Facility GmbH

Prof. Dr. Robert Feidenhans'l
Managing Director

Dr. Nicole Elleuche
Managing Director

Schedule of movements in fixed assets
of European X-Ray Free-Electron Laser Facility GmbH, Hamburg,
during the 2022 financial year

Acquisition and production cost

	As at 1/1/2022	Additions	Re- classifications	Disposals	As at 31/12/2022
	EUR	EUR	EUR	EUR	EUR
I. Intangible assets					
1. Internally generated industrial rights and similar rights and assets	6,199,110.90	0.00	0.00	0.00	6,199,110.90
2. Purchased industrial rights and similar rights and assets as well as licences for such rights and assets	1,214,127.93	67,399.67	4,383,963.45	0.00	5,665,491.05
3. Payments on account	3,591,476.92	981,324.85	-4,383,963.45	0.00	188,838.32
	11,004,715.75	1,048,724.52	0.00	0.00	12,053,440.27
II. Tangible assets					
1. Buildings on third-party land	108,471,871.69	308,648.25	0.00	0.00	108,780,519.94
2. Technical equipment and machinery	1,128,743,562.89	3,602,961.25	0.00	0.00	1,132,346,524.14
3. Other equipment, furniture and fixtures	11,980,484.42	687,318.35	0.00	8,833.62	12,658,969.15
4. Payments on account and assets under construction	25,135,843.01	15,220,351.11	0.00	88,270.00	40,267,924.12
	1,274,331,762.01	19,819,278.96	0.00	97,103.62	1,294,053,937.35
	1,285,336,477.76	20,868,003.48	0.00	97,103.62	1,306,107,377.62

Accumulated amortisation and depreciation				Carrying amount	
As at 1/1/2022	Additions	Disposals	As at 31/12/2022	As at 31/12/2022	As at 31/12/2021
EUR	EUR	EUR	EUR	EUR	EUR
5,221,172.90	977,938.00	0.00	6,199,110.90	0.00	977,938.00
1,104,443.93	678,992.61	0.00	1,783,436.54	3,882,054.51	109,684.00
0.00	0.00	0.00	0.00	188,838.32	3,591,476.92
6,325,616.83	1,656,930.61	0.00	7,982,547.44	4,070,892.83	4,679,098.92
16,196,518.69	3,868,918.46	0.00	20,065,437.15	88,715,082.79	92,275,353.00
248,658,302.89	71,333,138.69	0.00	319,991,441.58	812,355,082.56	880,085,260.00
8,134,511.14	1,361,148.43	0.00	9,495,659.57	3,163,309.58	3,845,973.28
0.00	0.00	0.00	0.00	40,267,924.12	25,135,843.01
272,989,332.72	76,563,205.58	0.00	349,552,538.30	944,501,399.05	1,001,342,429.29
279,314,949.55	78,220,136.19	0.00	357,535,085.74	948,572,291.88	1,006,021,528.21