

REMUNERATION REPORT FOR THE YEAR 2021

BRD – GROUPE SOCIETE GENERALE

1. INTRODUCTION

Starting 28.08.2020, in Romania entered into force the Law no. 158 for the amendment, completion and repealing of certain legislative acts, including Law no. 24/ 2017, for issuers whose securities are admitted to trading on a regulated market.

This document that complies with the provisions of the Law no. 158/ 2020 represents the Report on the remuneration of Executive and Non-Executive Directors for the year 2021 (hereinafter called the “**Remuneration Report**” or the “**Report**”) of **BRD – Groupe Société Générale** (hereinafter called “**BRD**” or the “**Bank**”).

The Remuneration Report is subject to the approval of the Board of Directors along with the annual financial statements for the given year and is submitted to vote within the Ordinary General Shareholders’ Meeting, the opinion of the shareholders within the general meeting regarding the Remuneration Report, resulting from the vote, having advisory character. Once approved, the Report is published on BRD’s website and can be inspected there for a period of ten years.

The principles of the remuneration of Executive and Non-Executive Directors are defined in a document called The Remuneration Policy for Executive and Non-Executive Directors (hereinafter called the “**Remuneration Policy**”), which was defined by the Board of Directors following the recommendations of the Remuneration Committee and approved in the Ordinary General Shareholders’ Meeting held on April 22, 2021. We remind that the Remuneration Policy includes governance and remuneration principles, including key elements of the remuneration package for :

- the Non-Executive Directors, members of the Board of Directors;
- the Executive Directors, members of the Management Committee.

BRD’s remuneration principles provide a strong alignment between the achievement of long-term strategic objectives, values and long-term interests of the Bank and the delivery of value to shareholders, align the interest of the Bank and of its clients, employees and shareholders and prevent inadequate risk appetite and imprudent conduct. The Remuneration Policy is an integral part of the Bank’s overall business strategy.

The Remuneration Report contains information regarding the remuneration of all Executive and Non-Executive Directors who were subject to the Remuneration Policy during 2021. The Remuneration Report does not contain information about :

- former Executive Directors who were not subject to the Remuneration Policy during 2021 but who may, nevertheless, still receive variable remuneration components under the relevant deferred and retention schemes for the past periods;
- portion of variable remunerations granted to current Executive Directors for performance periods prior to 2021 and paid during 2021.

2. THE 2021 OVERVIEW OF THE REMUNERATION COMPONENTS OF NON-EXECUTIVE DIRECTORS, MEMBERS OF THE BOARD OF DIRECTORS

The Board of Directors at BRD consists of nine (9) members: eight (8) members Non-Executive Directors and one (1) member who is also Executive Director. Petre Bunescu (Non-Executive Director, member) resigned from the Board of Directors starting 1st of March 2021. Aurore Brigitte Gaspar and Maria Rousseva took on the role of member of the Board of Directors starting 26th of July 2021.

The remuneration of Non-Executive Directors, members of the Board of Directors, is paid in accordance with the Remuneration Policy approved by the Ordinary General Meeting of Shareholders.

The remuneration of Non-Executive Directors in 2021 consisted of gross fixed monthly fee. Furthermore, an additional remuneration could be paid to independent non-executive members of the Board of Directors.

If new members are appointed to the Board of Directors as Non-Executive Directors while this Remuneration Policy is in effect, the same remuneration as outlined above will apply to them.

2.1. Fixed remuneration components

The Ordinary General Shareholders' Meeting approved for 2021 the monthly individual fixed remuneration for Non-Independent Non-Executive Directors amounting to 1.800 Euros gross/ month and for Independent Non-Executive Directors amounting to 3.600 Euros gross/ month. If a member of the Board of Directors is also an Executive Director, he/ she does not receive monthly fixed remuneration.

No change to the Non-Executive Directors' fixed remuneration was made over the past five years, except the change in Independent Non-Executive Directors' fixed remuneration made in 2019 from 1.800 Euros gross/ month to 3.600 Euros gross/ month.

Non-Executive Directors, members of the Board of Directors have no pension benefits for their membership of the Board of Directors.

Non-Executive Directors were paid an annual gross fixed individual remuneration for 2021 as follows:

Non-Executive Director, **Chairman**

Giovanni Luca Soma → 106.633 Ron

Independent Non-Executive Director, **members**

Bogdan Alexandru Dragoi → 212.942 Ron

Liliana Ionescu-Feleaga → 212.942 Ron

Jean-Pierre Georges Vigroux → 212.942 Ron

Non-Executive Director, **members**

Benoît Jean Marie Ottenwaelter → 106.633 Ron

Valérie Marcelle Villafranca → 106.633 Ron

Aurore Brigitte Gaspar → 46.659 Ron (*starting 26th of July 2021*)

Maria Rousseva → 46.659 Ron (*starting 26th of July 2021*)

Petre Bunescu → 17.600 Ron (*2 months*)

2.2. Variable remuneration in 2021

To guarantee total independence in fulfilling their mandates, the Non-Executive Directors do not benefit from variable remuneration. Non-Executive Directors do not participate in remuneration schemes where payout is linked to performance.

2.3. Extra payments

Non-Executive Directors were not provided with any extra payments in 2021.

3. THE 2021 OVERVIEW OF THE REMUNERATION COMPONENTS OF EXECUTIVE DIRECTORS, MEMBERS OF THE MANAGEMENT COMMITTEE

The Management Committee in BRD consists of eight (8) Executive Directors:

- François Bloch, Chief Executive Officer
- Radu Topliceanu, Deputy Chief Executive Officer, Retail
- Yves Lallemand, Deputy Chief Executive Officer, Corporate
- Claudiu Cercel, Deputy Chief Executive Officer, Financial Markets
- Stéphane Fortin, Deputy Chief Executive Officer, Finance and Treasury
- Mirela Medeleian, Deputy Chief Executive Officer, Project and Operations
- Mihai Selegean, Deputy Chief Executive Officer, Legal
- Philippe Thibaud, Deputy Chief Executive Officer, Risk

There was one (1) change to the membership of the Management Committee in 2021:

François Aldeguer, Deputy Chief Executive Officer in charge with Operations left on 31st of January 2021 and Mirela Medeleian joined the Management Committee starting 7th of June 2021.

In accordance the Remuneration Policy, the remuneration of the members of Executive Directors in 2021 consisted of fixed components of remuneration and variable components of remuneration.

- (i) The fixed components of remuneration** in 2021 consisted of (i) gross monthly allowance and (ii) benefits in kind (financial and non-financial benefits).

Executive Directors did not receive any additional fixed remunerations from other entities of the Group and did not benefit from discretionary pension benefits.

(ii) The awarded variable component of remuneration for 2021 year performance:

- (i) will be paid out in accordance with the deferred and retention bonus scheme set out in Remuneration Policy;
- (ii) is a component of remuneration which is awarded based on performance achievement rate and the manner and circumstances under which the objectives were achieved in a pandemic situation which continues to have an important influence on economy and business undertaking;
- (iii) is based on quantitative and qualitative, collective and individual objectives (detailed below), thus combining an evaluation of the Bank's financial performance put in the context of the

Group's performance with an assessment of managerial skills, in line with the Bank's strategy and leadership model;

- (iv) shall not exceed 100% of the fixed component of the total remuneration for each individual;
- (v) does not refer to long-term incentives (LTI) as Executive Directors are not eligible for it;
- (vi) was not subject to the application of malus and claw-back arrangements;
- (vii) does not include any extra reward.

3.1. Objectives for the year 2021

Objectives for the given financial year are established by the Remuneration Committee and approved by the Board of Directors. Every objective has its weight expressed as a percentage their sum being equal to 100%. The objectives are divided into quantitative and qualitative objectives and the qualitative portion has a weight that cannot exceed 50% (excepting for the Executive Director of RISK for whom the financial performance cannot be taken into account in order to ensure his/ her independency) :

- (i) **Quantitative** objectives :
 - **Return on Equity (ROE)**: measures the effectiveness of the invested capital.
 - **Cost Income Ratio (C/ I)**: represents an efficiency ratio by measuring operating costs as a percentage of operating income.
 - **Client Satisfaction** is measured by using the **Net Promoter Score** in the Bank's key areas of business – Retail and Corporate. It is providing the core measurement for customer experience and predicts business growth.
 - **Employee Satisfaction**: using the Staff Engagement Rate measured through a regular survey.
- (ii) **Qualitative** objectives :
 - **Innovations** focus on the implementation of the **Bank's Strategy** and short and long-term **Business Priorities**.
 - Timely Approval of **Risk Appetite Statement** and Compliance to it, promoting **Sound and Effective Risk Management**.
 - Assessment of **Compliance with Regulatory Requirements** and **Compliance programs** (e.g., KYC programs, La Fayette).
 - **Managerial culture and conduct**: reflects the development of managerial culture in the area under the responsibility of the Executive Director taking into account the commitment for Bank's values set out in the Code of Conduct, the talent development program, succession planning, defining new ways of working and WFH policy.
 - **Promoting corporate social responsibility (CSR)**: through a responsible conduct of the Bank itself and the support and funding of sustainable development activities and involvement in charitable activities.

The **collective** and **individual** objectives for 2021 and their weights are as follows:

2021 Objectives		François Bloch	Radu Topiceanu	Yves Lallemand	Claudiu Cercel	Stéphane Fortin	Mirela Medeleian	Mihai Selegear	Philippe Thibaud**
Collective (SG Group)	it includes: Financial Performance*, Client Satisfaction, People & Culture, Reponsibility & Conduct	25%	20%	20%	20%	20%	20%	20%	20%
Individual (BRD)	Strategy & Financial roadmap it includes: Financial Performance, Client Satisfaction, Finalization of BRD 2025 strategy, Innovation, Development of CSR activities	35%	40%	40%	40%	35%	35%	35%	30%
	Supervisors' requirements it includes: Compliance with Regulatory Requirements and Compliance programs, Timely Approval of Risk Appetite Statement and Compliance to it, Contribution to Group regulatory projects	20%	20%	20%	20%	20%	20%	20%	20%
	Management it includes: Employee Satisfaction, Managerial culture and conduct	20%	20%	20%	20%	25%	25%	25%	30%

*) SG for F. Bloch, EURO for the rest of Executive Directors

**) financial performance objectives not taken into account

3.2. Achievement rate for 2021 of Executive Directors' individual performance

The annual assessment of Executive Directors' performance evaluation for 2021 was made by the Board of Directors at its meeting held on 14 March 2022 in accordance with the Remuneration Policy. Objectives and targets of Executive Directors for 2021 were set by the Board of Directors, at the proposal of the Remuneration Committee, at its meeting held on 8 March 2021.

The breakdown of performance achievement rates by collective and individual objectives approved by the Board of Directors on 14 March 2022 are presented in the table below:

		Parent Group perimeter (collective objectives)	Scope of responsibility of Executive Directors (individual objectives - BRD)	Global achievement rate for the 2021 objectives
François Bloch	Weight	25%	75%	104.5%
	Achievement rate	111.0%	102.3%	
Radu Topiceanu	Weight	20%	80%	101.8%
	Achievement rate	104.6%	101.1%	
Yves Lallemand	Weight	20%	80%	102.3%
	Achievement rate	104.6%	101.7%	
Claudiu Cercel	Weight	20%	80%	102.3%
	Achievement rate	104.6%	101.7%	
Stéphane Fortin	Weight	20%	80%	102.2%
	Achievement rate	104.6%	101.6%	
Mirela Medeleian	Weight	20%	80%	102.2%
	Achievement rate	104.6%	101.6%	
Mihai Selegear	Weight	20%	80%	102.4%
	Achievement rate	104.6%	101.9%	
Philippe Thibaud	Weight	20%	80%	100.5%
	Achievement rate	102.1%	100.1%	

3.3. The deferral and retention scheme regarding the variable remuneration component for 2021 year performance

The variable remuneration component for the performance in 2021 which was awarded by the Board of Directors on 14 March 2022 following the recommendations of the Remuneration Committee will be paid out between 2022 and 2028 according to the below deferral and retention scheme. The variable remuneration component awarded for 2021 did not exceed 100% of the fixed remuneration component for 2021 of any of the Executive Directors with respect of the Remuneration Policy.

Allocation	Vesting			Month of payment
	%	Type	Month	
40% on spot	20%	cash	March 2022	March 2022
	20%	BRDTP	March 2022	March 2023
60% deferred	12%	cash	March 2023	March 2023
	12%	cash	March 2024	March 2024
	12%	BRDTP	March 2025	March 2026
	12%	BRDTP	March 2026	March 2027
	12%	BRDTP	March 2027	March 2028

According to the Remuneration Policy, we remind that BRDTP or share equivalents is a component of the variable remuneration expressed in units, whose value is determined based on the price of BRD shares, listed on BVB for a relevant reference period preceding the date of:

- bonus granting for 2021: the trade-weighted average (VWAP) of February 2022;
- bonus payment: the trade-weighted average (VWAP) of the previous month of payment.

3.4. Information on total remuneration awarded for 2021 to each Executive Director

For 2021, **François Bloch, Chief Executive Officer** received fixed remuneration including an annual indemnity of 2.134.264 Ron gross and benefits in kind of 763.211 Ron gross¹ that were paid according to the Remuneration Policy.

The variable remuneration granted for the performance in 2021 was 465.000 Euros gross out of which 186.000 Euros gross vested in March 2022 and 279.000 Euros gross non-vested and deferred. Payment of variable remuneration for 2021 will be made according to the deferral and retention scheme in either cash (44% of variable remuneration) or share equivalents (56% of variable remuneration).

For 2021, 56% of Chief Executive Officer's total remuneration is fixed remuneration, and 44% is variable remuneration².

In 2021 **François Bloch** did not receive any additional fixed remuneration from other entities of the Group nor any exceptional variable remuneration. No change to the composition of the total remuneration package was made in 2021.

For 2021, **Radu Topliceanu, Deputy Chief Executive Officer**, received fixed remuneration including an annual indemnity of 1.235.038 Ron gross and benefits in kind of 3.834 Ron gross that were paid according to the Remuneration Policy.

The variable remuneration granted for the performance in 2021 was 160.000 Euros gross out of which 64.000 Euros gross vested in March 2022 and 96.000 Euros gross non-vested and deferred. Payment of variable

¹ including employer's contribution maintained in the home-country (FR)

² an exchange rate of 4,95 Ron/Euro was taken into account

remuneration for 2021 will be made according to the deferral and retention scheme in either cash (44% of variable remuneration) or share equivalents (56% of variable remuneration).

For 2021, 61% of Retail Deputy Chief Executive Officer's total remuneration is fixed remuneration, and 39% is variable remuneration².

In 2021 **Radu Topliceanu** did not receive any additional fixed remuneration from other entities of the Group nor any exceptional variable remuneration. No change to the composition of the total remuneration package was made in 2021.

For 2021, **Yves Lallemand, Deputy Chief Executive Officer**, received fixed remuneration including an annual indemnity of 1.371.142 Ron gross and benefits in kind of 1.003.183 Ron gross³¹ that were paid according to the Remuneration Policy.

The variable remuneration granted for the performance in 2021 was 272.270 Euros gross out of which 108.908 Euros gross vested in March 2022 and 163.362 Euros gross non-vested and deferred. Payment of variable remuneration for 2021 will be made according to the deferral and retention scheme in either cash (44% of variable remuneration) or share equivalents (56% of variable remuneration).

For 2021, 64% of Corporate Deputy Chief Executive Officer's total remuneration is fixed remuneration, and 36% is variable remuneration².

In 2021 **Yves Lallemand** did not receive any additional fixed remuneration from other entities of the Group nor any exceptional variable remuneration. No change to the composition of the total remuneration package was made in 2021.

For 2021, **Claudiu Cercel, Deputy Chief Executive Officer**, received fixed remuneration including an annual indemnity of 1.007.698 Ron gross and benefits in kind of 3.830 Ron gross that were paid according to the Remuneration Policy.

The variable remuneration granted for the performance in 2021 was 120.000 Euros gross out of which 48.000 Euros gross vested in March 2022 and 72.000 Euros gross non-vested and deferred. Payment of variable remuneration for 2021 will be made according to the deferral and retention scheme in either cash (44% of variable remuneration) or share equivalents (56% of variable remuneration).

For 2021, 63% of Financial Markets Deputy Chief Executive Officer's total remuneration is fixed remuneration, and 37% is variable remuneration².

In 2021 **Claudiu Cercel** did not receive any additional fixed remuneration from other entities of the Group nor any exceptional variable remuneration. No change to the composition of the total remuneration package was made in 2021.

¹ including employer's contribution maintained in the home-country (FR)

² an exchange rate of 4,95 Ron/Euro was taken into account

For 2021, **Stéphane Fortin, Deputy Chief Executive Officer**, received fixed remuneration including an annual indemnity of 874.844 Ron gross and benefits in kind of 738.853 Ron gross¹ that were paid according to the Remuneration Policy.

The variable remuneration granted for the performance in 2021 was 78.027 Euros gross out of which 31.211 Euros gross vested in March 2022 and 46.816 Euros gross non-vested and deferred. Payment of variable remuneration for 2021 will be made according to the deferral and retention scheme in either cash (44% of variable remuneration) or share equivalents (56% of variable remuneration).

For 2021, 81% of Finance and Treasury Deputy Chief Executive Officer's total remuneration is fixed remuneration, and 19% is variable remuneration².

In 2021 **Stéphane Fortin** did not receive any additional fixed remuneration from other entities of the Group nor any exceptional variable remuneration. No change to the composition of the total remuneration package was made in 2021.

For 2021 (07.06. – 31.12.2021), **Mirela Medelean, Deputy Chief Executive Officer**, received fixed remuneration including an annual indemnity of 423.879 Ron gross and benefits in kind of 4.462 Ron gross that were paid according to the Remuneration Policy.

The variable remuneration granted for the performance in 2021 (including also her previous role) was 40.000 Euros gross out of which 16.000 Euros gross vested in March 2022 and 24.000 Euros gross non-vested and deferred. Payment of variable remuneration for 2021 will be made according to the deferral and retention scheme in either cash (44% of variable remuneration) or share equivalents (56% of variable remuneration).

For 2021, 79% of Projects and Operations Deputy Chief Executive Officer's total remuneration is fixed remuneration, and 21% is variable remuneration².

In 2021 **Mirela Medelean** did not receive any additional fixed remuneration from other entities of the Group nor any exceptional variable remuneration. No change to the composition of the total remuneration package as Deputy Chief Executive Officer was made in 2021.

For 2021, **Mihai Selegean, Deputy Chief Executive Officer**, received fixed remuneration including an annual indemnity of 604.594 Ron gross and benefits in kind of 3.627 Ron gross that were paid according to the Remuneration Policy.

The variable remuneration granted for the performance in 2021 was 50.000 Euros gross out of which 20.000 Euros gross vested in March 2022 and 30.000 Euros gross non-vested and deferred. Payment of variable remuneration for 2021 will be made according to the deferral and retention scheme in either cash (44% of variable remuneration) or share equivalents (56% of variable remuneration).

¹ including employer's contribution maintained in the home-country (FR)

² an exchange rate of 4,95 Ron/Euro was taken into account

For 2021, 71% of Legal Deputy Chief Executive Officer's total remuneration is fixed remuneration, and 29% is variable remuneration ².

In 2021 **Mihai Selegean** did not receive any additional fixed remuneration from other entities of the Group nor any exceptional variable remuneration. No change to the composition of the total remuneration package was made in 2021.

For 2021, **Philippe Thibaud, Deputy Chief Executive Officer**, received fixed remuneration including an annual indemnity of 974.484 Ron gross and benefits in kind of 349.054 Ron gross¹ that were paid according to the Remuneration Policy.

The variable remuneration granted for the performance in 2021 was 55.000 Euros gross out of which 22.000 Euros gross vested in March 2022 and 33.000 Euros gross non-vested and deferred. Payment of variable remuneration for 2021 will be made according to the deferral and retention scheme in either cash (44% of variable remuneration) or share equivalents (56% of variable remuneration).

For 2021, 83% of Risk Deputy Chief Executive Officer's total remuneration is fixed remuneration, and 17% is variable remuneration ².

In 2021 **Philippe Thibaud** did not receive any additional fixed remuneration from other entities of the Group nor any exceptional variable remuneration. No change to the composition of the total remuneration package was made in 2021.

For 2021 (01.01. – 31.01.2021), **François Aldeguer, Deputy Chief Executive Officer**, received fixed remuneration including an annual indemnity of 83.511 Ron gross and benefits in kind of 100.158 Ron gross¹ that were paid according to the Remuneration Policy.

No variable remuneration was granted to **François Aldeguer** for the performance in 2021.

In 2021, **François Aldeguer** did not receive any additional fixed remuneration from other entities of the Group nor any exceptional variable remuneration. No change to the composition of the total remuneration package was made in 2021.

¹ including employer's contribution maintained in the home-country (FR)

² an exchange rate of 4,95 Ron/Euro was taken into account

3.5. Changes in Executive Directors' remunerations compared with the change in average employee remuneration

Changes (%) in Executive Directors' remuneration*	2017	2018	2019	2020	2021
François Bloch, Chief Executive Officer starting 2017	N/A	+3.3%	+1.2%	-7.5%	+17.8%
Radu Topliceanu, Deputy Chief Executive Officer, Retail starting 2020	N/A	N/A	N/A	N/A	+12.6%
Yves Lallemand, Deputy Chief Executive Officer, Corporate starting 2018	N/A	N/A	-0.3%	-1.3%	+4.5%
Claudiu Cercel, Deputy Chief Executive Officer, Financial Markets	+0.8%	+1.9%	+3.0%	-5.3%	+9.6%
Stéphane Fortin, Deputy Chief Executive Officer, Finance and Treasury starting 2020	N/A	N/A	N/A	N/A	+5.2%
Mirela Medeleian, Deputy Chief Executive Officer, Projects and Operations starting 2021	N/A	N/A	N/A	N/A	N/A
Mihai Selegean, Deputy Chief Executive Officer, Legal starting 2020	N/A	N/A	N/A	N/A	+7.6%
Philippe Thibaud, Deputy Chief Executive Officer, Risk starting 2020	N/A	N/A	N/A	N/A	+6.3%

*) compared to the previous year. LTI granted in 2016 were not taken into account

Change (%) in average employee remuneration*	2017	2018	2019	2020	2021
	+3.2%	+10.5%	+8.8%	+6.4%	+6.5%

*) compared to the previous year

3.6. BRD performance over the past five years

BRD delivered a strong commercial and financial performance. The level of profitability remained high, with a return on shareholders' equity above 15%, on average, over the past five years. In the same time, BRD maintained a healthy and solid capital adequacy ratio supporting future business growth and resistance to possible stress events.

KEY FIGURES											
BRD, individual level (RONm)	2021	2020	2019	2018	2017	2016	Evo '21/'20	Evo '20/'19	Evo '19/'18	Evo '18/'17	Evo '17/'16
Net banking income	2,950	2,927	3,170	2,981	2,641	2,634	+0.8%	-7.7%	+6.3%	+12.8%	+0.3%
Operating expenses	(1,515)	(1,481)	(1,580)	(1,400)	(1,388)	(1,310)	+2.2%	-6.3%	+12.9%	+0.9%	+5.9%
Gross operating income	1,436	1,445	1,590	1,581	1,254	1,324	-0.6%	-9.1%	+0.5%	+26.1%	-5.3%
Cost/income	51.3%	50.6%	49.9%	47.0%	52.5%	49.7%	+0.7 pt	+0.8 pt	+2.9 pt	-5.6 pt	+2.8 pt
Net profit	1,279	952	1,529	1,546	1,380	728	+34.4%	-37.7%	-1.1%	+12.0%	+89.5%
Shareholders' equity	9,539	9,472	7,895	7,327	7,028	6,367	+0.7%	+20.0%	7.8%	+4.3%	+10.4%
ROE	13.5%	11.0%	20.1%	21.5%	20.6%	11.8%	+2.5 pt	-9.1 pt	-1.5 pt	+0.9 pt	+8.8 pt
Total capital ratio*	22.8%	33.7%	24.9%	21.1%	19.8%	19.8%	-10.9 pt	+8.8 pt	+3.8 pt	+1.3 pt	+0.0 pt
Loans and deposits (RON bn)											
Net loans	32.2	28.9	29.5	28.9	29.0	27.4	+11.5%	-2.0%	+2.0%	-0.4%	+5.9%
Deposits	52.9	50.2	46.0	45.3	44.4	42.3	+5.5%	+8.9%	+1.6%	+2.1%	+5.0%

(*) own funds at 2021 end exclude 2021 year result and are after the exceptional distribution from the retained profits of 2019 and 2020

4. CLOSING PARTS OF THE REMUNERATION REPORT

4.1. Compliance with the Remuneration Policy

There have been no deviations from the Remuneration Policy in relation to remuneration for the Board of Directors and the Management Committee in 2021. The remuneration followed the structure and principles outlined in the Remuneration Policy for all remuneration components.