KELER CENTRAL DEPOSITORY LTD.

Consolidated Financial Statements prepared in accordance with International Financial Reporting Standards as adopted by the European Union
and
Independent Auditor's Report

for the year ended 31 December 2019

CONTENTS

Explanation of the abbreviations used in the financial statements:

AC	Financial asset measured at amortized cost
ARO	Asset retirement obligation
CBH	Central Bank of Hungary
CCP	Central Counterparty (may mean: clearing house)
CGU	Cash-generating unit
DKJ	Treasury Bills issued by the Hungarian State
EAD	Exposure At Default
ECC	European Commodity Clearing
ECL	Expected Credit Loss
EMIR	European Market Infrastructure Regulation
EPS	Earnings per share
CRR	Capital Requirement Regulation
FVTOCI	Fair value through other comprehensive income
FVTPL	Fair value through profit or loss
GCM	General Clearing Member
HAS	Hungarian Accounting Regulation
HTM	Held to maturity (financial asset)
IAS	International Accounting Standards
IFRIC/SIC	Interpretations of the International Financial Reporting Standards
IFRS	International Financial Reporting Standards
LGD	Loss Given at Default
LR	Loans and receivables (financial asset)
MÁK	Government Bonds issued by the Hungarian State
MHUF	Million Hungarian forints
OTC	Over-The-Counter
PD	Probability of Default
PO	Performance Obiligation
ROU	Right of use asset
SPPI	Cash Flow test of 'Solely Payments of Principal and Interest'
WACC	Weighted average cost of capital

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INDEPENDENT AUDITOR'S REPORT

To the Shareholders of KELER Ltd.

Report on the Audit of the Consolidated Financial Statements

Opinion

We have audited the consolidated financial statements of KELER Ltd. and its subsidiaries (the „Group") for the year 2019 which comprise the consolidated statement of financial position as at December 31, 2019 – which shows a total assets of M HUF 172.534 –, the consolidated statement of comprehensive income – which shows a total comprehensive income for the year of M HUF 1.490 –, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended and notes to the consolidated financial statements including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at December 31, 2019 and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union (the „EU IFRS"), and the consolidated financial statements were prepared in all material respects in accordance with the provisions of the effective Hungarian Act C of 2000 on Accounting (the „Accounting Act") relevant to the entities preparing consolidated financial statements in accordance with EU IFRS.

Basis for Opinion

We conducted our audit in accordance with the Hungarian National Standards on Auditing and the effective Hungarian laws and other regulations on audits. Our responsibilities under these standards are further described in the "*The Auditor's Responsibilities for the Audit of the Consolidated Financial Statements*" section of our report.

We are independent of the Group in compliance with the relevant effective Hungarian regulations and the "Rules of conduct (ethical rules) of the auditor profession and the disciplinary process" of the Chamber of Hungarian Auditors and, in respect of matters not regulated therein, the "Code of Ethics for Professional Accountants" (the IESBA Code) issued by the International Ethics Standards Board for Accountants, and we have fulfilled our other ethical responsibilities in accordance with the same ethical requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matter	How our audit addressed the matter
Settlement of fees and commissions for depository and clearing services	
(Please, see Note 25 of the notes of the consolidated financial statements for details.) The Group's income on fees and commissions of depository and clearing services is M HUF 7.043 in current year. There is a risk that whether the income of these fees and commissions related to depository and clearing services have been settled in accordance with the terms of the relevant contractual arrangements or the terms and conditions of the business rules published in the notices of fees. Considering these facts above, the accounting of these depository and clearing services' revenues was considered as a key audit matter.	The relevant audit procedures performed by us related to incomes from depository and clearing services included the followings: • examining the design, implementation and operating effectiveness of depository and clearing services' fees' and commissions' determination, approval, recording in the clearing system, modification of fixed fee parameters in the basic internal control systems; • examining the design, implementation and operating effectiveness of the basic internal control systems related to the process of financial settlement of stock exchange (BÉT) or over-the-counter (OTC) transactions' fees (recording on cash and securities accounts, etc.) affecting the accounting of certain significant custodian and credit institution activities within the depository services; • examining the design and implementation of basic internal control systems related to other activities in depository and clearing services (fixing of master data of partners, opening of accounts, closing of accounts, recordings of certain output services, settlements); • recalculating and analyzing some of the major custodian and credit institution fees and certain major clearing fees within the custodian services with the help of the underlying data (transactions or stocks, as well as contractual or announcement specific rates); • substantive detailed test based on statistical sample selection for the total amount of custody and clearing fees. We have examined the relevant accounting and disclosures.

Other Information: The Consolidated Business Report

Other information includes the consolidated business report of the Group for 2019. Management is responsible for the preparation of the consolidated business report in accordance with the relevant provisions of the Accounting Act and other regulations. Our opinion on the consolidated financial statements provided in the section of our independent auditor's report entitled „*Opinion*" does not apply to the consolidated business report.

Our responsibility in connection with our audit of the consolidated financial statements is to read the consolidated business report and, in doing so, consider whether the consolidated business report is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

Furthermore, in accordance with the Accounting Act, our responsibilities also include assessing whether the consolidated business report was prepared in accordance with the relevant provisions of the Accounting Act and other regulations, and to express an opinion on the above and on whether the consolidated business report is consistent with the consolidated financial statements.

In our opinion, the consolidated business report of the Group for 2019 corresponds to the consolidated financial statements of the Group for 2019 and the relevant provisions of the Accounting Act in all material respects. As the Group is not subject to additional requirements under any other regulation in connection with the consolidated business report, we have not formulated an opinion on this matter.

In addition to the above, based on the information obtained about the Group and its environment, we must report on whether we became aware of any material misstatements in the consolidated business report and, if so, on the nature of such material misstatements. We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with the Accounting Act, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

The Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives during the audit are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue, on the basis of the above, an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Hungarian National Standards on Auditing and the effective Hungarian laws and other regulations on audits will always detect a material misstatement when it exists. Misstatements can arise from fraud or error, and they are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with the Hungarian National Standards on Auditing and the effective Hungarian laws and other regulations on audits, we exercise professional judgment and maintain professional scepticism throughout the audit.

We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify the opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in the Group's internal control that we identify during the audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements

In compliance with Article 10 (2) of Regulation (EU) No. 537/2014 of the European Parliament and the Council, we provide the following information in our independent auditor's report, which is required in addition to the requirements of International Standards on Auditing:

Appointment of the Auditor and the Period of Engagement
We were appointed as the auditors of KELER Ltd. by the General Meeting of Shareholders on 17th May 2017 and our uninterrupted engagement has lasted for 3 years.

Consistence with the Additional Report to the Audit Committee
We confirm that our audit opinion on the consolidated financial statements expressed herein is consistent with the additional report to the Audit Committee of KELER Ltd., which we issued on 5th May, 2020 in accordance with Article 11 of Regulation (EU) No. 537/2014 of the European Parliament and the Council.

Provision of Non-audit Services
We declare that no prohibited non-audit services referred to in Article 5 (1) of Regulation (EU) No. 537/2014 of the European Parliament and the Council were provided by us to the Group. In addition, there are no other non-audit services which were provided by us to KELER Ltd. and and its controlled undertakings and which have not been disclosed in the consolidated business report.

The engagement partner on the audit resulting in this independent auditor's report is the signatory of the report.

Budapest, 5th May 2020

The original Hungarian version has been signed

Nagyváradiné Szépfalvi Zsuzsanna
on behalf of Deloitte Auditing and Consulting Ltd.
and as a statutory registered auditor
Registration number of statutory registered auditor: 005313

Deloitte Auditing and Consulting Ltd.
1068 Budapest, Dózsa György út 84/C.
Registration number: 000083

		31.12.2019	31.12.2018
Cash and cash equivalents	5	34 722	28 970
Placements with other banks	5	72 913	50 045
Financial assets measured at amortized cost	6	16 446	14 232
Debt instruments measured at fair value through other comprehensive income	6	23 392	35 380
Income Tax - Current tax receivables	9	19	150
Income Tax - Deferred tax assets	18	128	0
Receivables from clearing on gas market	7	2 485	4 941
Receivables from clearing and depository activities	8	640	622
Receivables from foreign clearing houses	10	18 176	19 753
Other receivables	9	1 180	1 690
Intangible assets	11	1 293	996
Property, plant and equipment	12	1 140	796
TOTAL ASSETS		**172 534**	**157 575**
Deposits from customers	16	135 267	115 053
Liabilities for Guarantee Funds	17	6 950	8 276
Income Tax - Current tax liability	15	49	0
Other tax payables	15	210	296
Trade payable from gas market activity	7	2 465	4 908
Trade payables	13	673	333
Lease liability	19	360	
Provisions	20	248	0
Other payables	14	563	450
TOTAL LIABILITIES		**146 785**	**129 316**
Share capital	21	4 500	4 500
Retained earnings		20 869	23 463
Statutory reserves	22	371	267
Reserves of financial instruments measured ad fair value through other comprehensive income	23	9	29
Equity holders of the Parent Company		25 749	28 259
Non-controlling interest		0	0
TOTAL SHAREHOLDERS' EQUITY		**25 749**	**28 259**
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY		**172 534**	**157 575**

		01.01.2019-31.12.2019	*01.01.2018-31.12.2018*
Income from clearing and depository activity	***25***	***7 043***	***6 166***
Interest incomes for items measured at AC	26	1 228	1 005
Interest income for items measured at FVTOCI	26	113	50
		1 341	*1 055*
Interest expenses	26	-487	-373
Net interest income		***854***	***682***
Gains on securities, net	27	0	-3
Expected credit loss (ECL)	32	0	-6
Income from the principal activity		***7 897***	***6 839***
Bank service fees	28	-251	-232
Personnel expenses	29	-3 016	-2 786
Depreciation and amortization	30	-777	-551
Services and support for infrastructure	30	-704	-793
Professional fees	30	-507	-397
Telecommunication services	30	-98	-71
Insurance fees	30	-15	-14
Materials, supplies	30	-53	-40
Rental fees	30	-19	-125
Marketing fees	30	-3	-8
Education	30	-37	-37
Taxes and levies	30	-223	-229
Operational services	30	-247	-249
Fees and levies paid to regulatory bodies	30	-46	-41
Legal fees, procedural fees, costs, levies	30	-26	-77
Other cost of risk	30	-220	786
Other sundry operational expenses	30	-15	-1
Expenses from non deductable VAT	30	-146	-119
Operating expenses		***-6 403***	***-4 984***
Impairment of non-financial assets		-25	-159
Other income and expenses	31	113	138
Operating income		***1 582***	***1 834***
Other financial income and expenses	31	46	44
Financial income		***46***	***44***
INCOME BEFORE INCOME TAX		***1 628***	***1 878***

		01.01.2019-31.12.2019	01.01.2018-31.12.2018
Income taxes	33	-119	-267
PROFIT OR LOSS FOR THE PERIOD		***1 509***	***1 611***
Other comprehensive income, net:			
Remeasurement gains/losses of financial instruments measured at fair value through other comprehensive income	34	-18	18
Income tax of other comprehensive income		-1	1
OTHER COMPREHENSIVE INCOME FOR THE PERIOD		***-19***	***19***
Of which later to be reclassified to net income		-19	19
Of which later not to be reclassified to net income		0	0
TOTAL COMPREHENSIVE INCOME FOR THE YEAR		***1 490***	***1 630***

All profit or loss for the period and other comprehensive income for the period is attributable to the shareholders of Parent Company.

(All amounts in MHUF, unless stated otherwise)

	Issued capital	Fair value trough other comprehensive income reserve	Retained earnings	Statutory reserve	**Equity attributed to the shareholders of the parent**	**Non controlling interest**	**Total**
Balance on 1st January 2018	**4 500**	**494**	**23 780**	**122**	**28 896**	**0**	**28 896**
Changes in accounting policy	0	-484	-926	0	-1 410	0	-1 410
Total comprehensive income	0	19	1 611	0	1 630	0	1 630
Transfer to statutory reserve	0	0	-145	145	0	0	0
Dividend declared (30th May 2018)	0	0	-857	0	-857	0	-857
Balance on 31st December 2018	**4 500**	**29**	**23 463**	**267**	**28 259**	**0**	**28 259**
Total comprehensive income	0	-19	1 509	0	1 490	0	1 490
Transfer to statutory reserve	0	0	-104	104	0	0	0
Dividend declared (13th May 2019)	0	0	-4 000	0	-4 000	0	-4 000
Balance on 31st December 2019	**4 500**	**10**	**20 868**	**371**	**25 749**	**0**	**25 749**

The accompanying notes (NOTE 1- NOTE 45) of the financial statements form an integral part of these consolidated financial statements

	01.01.2019-31.12.2019	01.01.2018-31.12.2018
CASH FLOW FROM OPERATING ACTIVITIES		
INCOME BEFORE INCOME TAX	1 628	1 878
Interest expense	487	373
	2 115	*2 251*
Non-cash items - adjustments		
Interest income	-1 340	-1 055
Depreciation and amortization charged	778	551
Impairment loss / reversal	0	0
Recognition / release of provision	220	-786
Unrealized gain on cash and cash equivalents	-48	-17
Impairment of intangible assets	25	159
Gain on disposing property plant and equipment	3	-4
Changes in the guarantee fund liability	-1 326	2 449
Operating cash-flow before working capital adjustments	**427**	**3 548**
Changes in the net balance of gas market transactions, net	13	-3
Changes of the deposits of clients, net (loro accounts)	20 214	18 665
Changes in the receivables from balance with other clearing houses	1 578	-6 122
Changes in trade and other receivables	3 067	529
Changes in trade and other payables	-2 382	196
Cash proceeds/cash paid from financial instruments	10 202	-2 020
Net increase (-) / decrease (+) in placements with other banks, net of allowance for losses	-22 868	-8 745
	10 251	*6 050*
Interest paid	-475	-391
Taxes paid	-165	-98
Cash generated (+) / used (-) in operation	**9 611**	**5 561**
CASH FLOW FROM INVESTING ACTIVITIES		
Acquisition of property, plant and equipment	-186	-619
Acquisition of intangible asset	-623	-856
Cash proceeds from disposal of property, plant and equipment	10	11
Cash proceeds from financial instruments held for investment purposes	0	0
Proceeds from interest	1 011	1 149
Cash generated (+) / used (-) from investing activity	**212**	**-315**

	01.01.2019-31.12.2019	01.01.2018-31.12.2018
CASH FLOW FROM FINANCING ACTIVITIES		
Dividend payment	-4 000	-857
Lease payments	-89	0
Cash generated (+) / used (-) from/in financing activity	**-4 089**	**-857**
Net increase (+) / decrease (-) in cash and cash equivalents	**5 734**	**4 389**
Opening cash and cash equivalents	28 970	24 564
Foreign exchange rate difference on cash and equivalents		
Closing cash and cash equivalents	34 722	28 970
Unrealized gain on cash and cash equivalents	18	17
Net decrease (-) / increase (+) in cash and cash equivalents	**5 734**	**4 389**

NOTE 1: GENERAL

Statement of IFRS compliance

The consolidated financial statements of KELER Central Depository Ltd. (hereinafter referred as "KELER" or "Company" or "Parent Company") and its' consolidated subsidiaries (also referred to as together the 'Entity' or 'Group') were prepared in accordance with International Financial Reporting Standards ("IFRSs"). The management declares that the Group fully complied with the provisions of IFRSs/IASs and IFRICs/SICs as endorsed by the European Union applicable in the current period. The management made this declaration in full awareness of its responsibility.

The management determined that the Group will be able to continue as a going concern, which means that there are no signs that would indicate that the Group intends to terminate or significantly reduce its operations in the foreseeable future.

These financial statements are also the consolidated financial statements of the Group, which are also deposited after the approval of the owners.

These financial statements were prepared using the accrual basis.

The Group generally measures its assets on a historical cost basis, except for cases where a given item should be measured at fair value under IFRS. Additional disclosures about measurement basis further discussed in Note 2.

Presentation of the Group (legal form on entities, seat)

The KELER Central Depository Ltd. is a limited liability company incorporated under the laws of Hungary on 12 October 1993. The official address of the company: H-1074 Budapest, Rákóczi str. 70-72.

The KELER Central Depository Ltd. is a special credit institution operating pursuant to Act CXX of 2001 on the Capital Market and Act CCXXXVII of 2013 on Credit Institutions and Financial Enterprises. The Company's primary activities are central securities depository services, specialized bank services, issuer services and ancillary CSD services. Supervisory authority order 33001/1994. designated KELER Ltd. to undertake central securities depository activities in Hungary.

KELER's owners

National Bank of Hungary	53,33%
Budapest Stock Exchange	46,67%.

There are no change in the ownership during ther period.

KELER KSZF Central Counterparty Ltd. ("KELER CCP"), as a subsidiary of KELER was founded by KELER, National Bank of Hungary ("CBH" or "MNB") and Budapest Stock Exchange ("BSE") in 2008.

KELER CCP was founded as a limited liability company according to the Hungarian laws. In 2011, KELER CCP was transformed to a private company limited by shares. Company's seat: H-1074 Budapest, Rákóczi str. 70-72.

KELER CCP's owners on 31 December 2019

- KELER 99.81%
- CBH 0.1%
- BSE 0.09%

The shareholder structure was the same at the end of 2018.

The ultimate parent of the Group is CBH, the shareholder of CBH is the Hungarian state.

KELER CCP is a central counterparty business association pursuant to the requirements of the Act CXX of 2001 on Capital Market ("Act on Capital Market") and Regulation (EU) No. 648/2012 of the European Parliament and of the Council (of 4 July 2012) on OTC derivatives, central counterparties and trade repositories, operating and guaranteeing the settlement of stock exchange and over-the-counter transactions. KELER CCP as central counterparty undertakes guarantee for transactions concluded on the Budapest Stock Exchange and for the financial performance of the gas market (Daily natural gas and capacity trading market) transactions. KELER CCP as general clearing member undertakes guarantee for the financial performance of power market transactions towards European Commodity Clearing AG. KELER CCP's direct partners are commodities service, securities service providers, financial institutions, participants of an organized market, or organizations performing clearing house activity. KELER CCP's activity ensures that market participants' guaranteed trades are settled risk free.

KELER KSZF acquired the EMIR license (described in regulation 648/2012/EU) from the Central Bank of Hungary.

The upper limit of the of the guarantee payment of KELER KSZF is derived from the equity of the Entity (ie. basic guaranteeing equity and supplementary guaranteeing equity).

One of the shareholder of the Company (Central Bank of Hungary) regularly enters into transactions with Entity. These transactions are not regarded as shareholder transactions since they are done on regular business terms same as if they were done with independent parties. The ultimate parent of the Group classified as a government entity in accordance with *IAS 24 Related Party Disclosures*. The Group applies the disclosure exemption granted in IAS 24.25.

The Parent enters into material transactions with the Government Debt Management Agency (ÁKK), those deals are security repurchase ("repo") transactions. The amount of repo transaction entered into during 2019 was 175 364 million HUF, there were no repo deals open at the end of the reporting period.

The Parent enters into material transaction with the Central Bank of Hungary, most of those deals are overnight deposits. The amount of the overnight deposit deals in 2019 was 948 858 million HUF, at the end of the year the overnight deposit balance is 10 150 million HUF.

Changes in the group structure

The group structure did not change during the period.

The controlling governmental party of the Group is the Central Bank of Hungary. The Group does not enter in material transaction with other governmental entities and has no material outstanding balance at the end of this reporting period.

NOTE 2: BASIS OF PREPARATION

a) Basis of measurement

The Group generally measures its assets and liabilities on historical cost basis, except for cases where a given item should be measured at fair value under IFRS. Latter one includes derivatives and debt instruments measured at fair value through other comprehensive income that are measured at fair value.

b) Functional currency, presentation currency

Items included in the consolidated financial statements are measured using Hungarian Forint, which is the currency of the primary economic environment in which the Group operates ('the functional currency').

These consolidated financial statements are presented in Hungarian Forints rounded to the nearest million ("MHUF").

c) Use of estimates and judgements

The preparation of consolidated financial statements in accordance with IFRS requires the management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual result may differ from these estimates.

In preparing its financial statements, the Group made critical estimates in connection with the following topics, which, as a result, are sources of uncertainty.

- The fair value of the financial instruments are valued at fair value as required by the IFRSs. These fair values are mostly quoted prices or based on quoted prices (Level 1 and Level 2). However they may change significantly over time leading to significantly different values as expected at the measurement day. Items measured at fair value, which is Level 3 measurement is especially judgmental, since the input date was determined based on information not directly observable. The information regarding the level of measurement of the items is presented in Note 38.

- The management's judgment in calculating the expected credit loss (ECL) of financial assets is key important decision. These estimations are done by risk management experts using based on information provided by other area. Group uses wildly accepted principles and assumptions. The recording of impairment loss based on ECL directly impacts net profit.

- The useful lives, the residual values and the recoverable amounts of intangible assets and property, plant and equipment are all based on estimates. Changes in these estimates may significantly change reported figures

- Certain items of the Group's assets can be tested for impairment at at cash generating unit (CGU) level only. Identifying CGUs requires complex professional judgment. In addition, when determining the recoverable value of CGUs, the Group's management is forced to rely on forecasts for the future which are uncertain by nature. The Group identified two CGUs which corresponds the legal entities (KELER CD, and CCP).

- The Group applies estimates and judgments to determine the value of the Customer relationship asset (recognized as an intangible). The recoverable amount of this asset is reviewed annually. This estimation is a major judgment and source of uncertainty (See Note 11).

- Deferred tax assets and liabilities depend on the legal environment. Changes in the legal environment may result in a significant change in the value of such items.

- The Group has a right-of-use asset where the underlying asset is the office building that serves as the headquarter building. The value of this asset was arrived to by discounting back the future cash flows from the lease agreement. For this computation the incremental interest rate was estimated. This was a material estimation since it effects both the value of the ROU and the value of the lease liability.

- The Group recognized a financial guarantee liability that was measured at fair value. The value depends on the predictions and expectations about the future. The nature of the estimation makes this a material judgement.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate revised and in any future period affected.

NOTE 3: SIGNIFICANT ACCOUNTING POLICIES

a) Basis of consolidation

Subsidiaries

The Group consists of the Parent Company and the subsidiaries. The Group includes all entities which are directly or indirectly controlled by the Parent Company.

Since the financial year beginning on 1 January 2014, control is defined in accordance with *IFRS 10 Consolidated Financial Statements* ("IFRS 10"). According to this standard, an investor has control over an investee if it has rights to the variable positive returns generated by the investee and bears the consequences of negative returns and has the ability to direct operations and, as a result, to affect those returns through its decisions (power). This ability to power of operation arises from rights.

Control is primarily obtained through equity ownership, agreements with other shareholders or a special market position (e.g. monopoly). KELER obtained control over all of the entities included in these consolidated financial statements by virtue of equity ownership.

Associates and joint arrangements

The Group does not have associates or joint arrangements during this reporting period.

Transactions eliminated during consolidation

Intercompany balances and transactions, and any unrealized gains arising from intercompany transactions are eliminated in the frame of consolidation.

Goodwill

Goodwill arising in a business combination is measured initially as the excess of the cost of the business combination over the acquirer's interest in the net fair value of the acquired identifiable assets, liabilities and contingent liabilities recognized. Goodwill is subject to an annual impairment test.

Negative goodwill

Negative goodwill arising in a business combination is measured initially as the excess of the net fair value of the acquired identifiable assets, liabilities and contingent liabilities recognized over the cost of the business combination. Negative goodwill that arise during the year is credited to the profit or loss.

b) Foreign currency transactions

Transactions in foreign currencies are translated to Hungarian forint at the foreign exchange rate effective at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies at the end of reporting period are translated to Hungarian forint at the foreign exchange rate officially published by National Bank of Hungary and effective at that date. Foreign exchange differences arising on translation are recognized in the Consolidated Statement of Comprehensive Income. Non-monetary assets and liabilities denominated in foreign currencies that are stated at fair value are translated to Hungarian forint at foreign exchange rates effective at the dates the values were determined.

From the Group's perspective the following foreign currencies are relevant:

	2019 closing	2019 average	2018 closing	2018 average
CHF	304,39	292,47	285,16	276,19
EUR	330,52	325,35	321,51	318,87
GBP	387,82	370,73	355,25	360,40
USD	294,74	290,65	280,94	270,25

c) Cash and cash equivalents

Cash includes deposits repayable on demand. Cash equivalents includes liquid investments (including the CBH overnight deposits) with maturity of three months or less when acquired at that there is insignificant risk of value change. Typically certain state bonds and treasury bills may meet the foresaid definition. Cash and cash equivalents are carried at amortized cost in the Consolidated Statements of Financial Position.

d) Financial assets and financial liabilities

Classification

Financial assets or financial liabilities at fair value through profit or loss (FVTPL) are financial assets and financial liabilities that are classified as held for trading mainly for the purpose of profit-taking or are derivative instruments.
(Note: The Group did not have any financial instruments during the current period which is classified to the category FVTPL due to its nature being held for trading.

Debt instruments that meet both SPPI test (i.e. cash flows from those are solely payments of principal and interest) and the business model of it is hold to collect the cash flows (business model test) will be classified o financial assets measured at amortised costs (AC category) and will be carried at amortized cost. This category include the state bonds (MÁK) of the Group, balances of trade and other receivables, receivables from foreign clearing houses and cash balances.

Debt instruments that meet SPPI test with, but based on the business model the purpose is collect the cash flows from holding the instruments or sell those will be classified at FVTOCI category.
(Note: the treasury bills held by the entity are classified and measured in this FVTOCI category)

The Group classifies the held equity instruments – excluded instruments held for trading purposes – into the FVTOCI category, that shall be measured at fair value at each reporting date (where in certain cases the cost of the instrument will be considered to be the fair value).

Other liabilities contain all financial liabilities that were not classified as at fair value through profit or loss.
(Note: Other liabilities contain interbank takings and loans from other banks, deposits from customers, liabilities relating to clearing and depository activities and liabilities from repo deal open as at the end of reporting period contracted with unconsolidated entities.)

Recognition

Financial assets and liabilities are recognised in the financial statements of the Group on the settlement date, except for derivative assets, which are recognised on the trade date. Financial assets or financial liabilities are initially measured at fair value plus (for an item not subsequently measured at fair value through profit or loss) transaction costs that are directly attributable to its acquisition or issue in case of all financial instruments that are not measured at fair value through profit or loss

Derecognition

Financial assets are derecognized when the rights to receive cash flows from the financial assets expire or the Group transfers substantially all risks and rewards of ownership of the financial asset (without retaining significant right).

Measurement

Subsequent to initial recognition, all financial assets and financial liabilities measured at fair value through profit or loss, and financial assets measured through other comprehensive income are measure at fair value. If no quoted market price exists from an active market and fair value cannot be reliably measured, the Group uses valuation techniques to determine fair value.

Financial assets classified to AC and all financial liabilities other than financial liabilities measured at fair value through profit or loss, are measured at amortized cost. Premiums and discounts, including initial transaction costs, are included in the carrying amount of the related instrument and amortized based on the effective interest rate of the instrument.

The debt instruments – except for items measured at fair value through profit or loss – are presented in the statements on an amount representing the deduction by accumulated impairment loss recorded based on expected credit losses. The part of this accumulated impairment loss based on expected credit losses attributable to current year is taken to the profit or loss.

Gains and losses on financial assets or financial liabilities measured at fair value through profit or loss are recorded in Consolidated Statement of Comprehensive income, as gains on securities (as an element of current year profit or loss, on a net basis)

Income calculated from effective interest method on a FVTOCI debt instrument will be taken to profit or loss, separately from the impairment losses and reversal determined based on expected credit losses (which is recognized in a different category of net profit) of the instrument. Gains or losses on disposal of instruments are recognized in profit or loss
The adjustments from fair value measurement of such a financial asset shall be recognized in other comprehensive income that is accumulated on a separate reserve within the equity. In the case of disposal (ie. sale or expiration), the previously accumulated other comprehensive income is reclassified to the profit or loss.

In the case of disposal FVTOCI instruments other than debt instruments, the previously accumulated other comprehensive income cannot reclassified to the profit or loss, that is transferred to retained earning within the equity.

Fair value measurement

The fair value of financial instruments is determined based on the requirements of *IFRS 13 Fair Value Measurement* ("IFRS 13") and internal policies established in accordance with that
Generally, the fair value is

- quoted market price at the end of reporting period without any deduction for transaction costs.
- If a quoted market price is not available, the fair value of the instrument is estimated using valuation models or discounted cash flow techniques.

Where discounted cash flow techniques are used, estimated future cash flows are based on the Group's economic estimates and the discount rate is a market related rate at the end of reporting period for an instrument with similar terms and conditions. Where valuation models are used, inputs are based on market related measures at the end of reporting period.

- Level 1: The input for the fair value is the unadjusted quoted price, no other input is used for the valuation.
- Level 2: All inputs are directly or indirectly observable but there are inputs other than the quoted price.
- Level 3: The fair value of derivatives that are not exchange-traded are estimated at the amount that the Group would receive upon normal business conditions to terminate the contract at the end of reporting period taking into account current market conditions and the current creditworthiness of the counterparties.

The fair value of the treasury bills is considered by the Group as Level 2, the fair value is based mainly on observable prices however, when the fair value of these assets cannot be determined based on such quoted prices, instrument are measured based on yields remarkable for similar financial instruments and generally used valuation techniques (Level 2).

Measurement of amortised cost

The amortized cost of a financial asset or financial liability is the amount at which the financial asset or financial liability is measured at initial recognition minus principal repayments, plus or minus the cumulative amortization using the effective interest method of any difference between that initial amount and the maturity amount, and minus any reduction for impairment or uncollectibility for financial assets.

The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument or, when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability. When calculating the effective interest rate, the Group estimates cash flows considering all contractual terms of the financial instrument but shall not consider future credit losses.

Impairment of financial assets (expected credit losses)

For financial assets measured at AC or FVTOCI, impairment losses is recognised based on expected credit losses. ECL can be determined as the cash shortfall throughout the life of the financial asset. The expected credit loss is determined from multiplying:

- exposure at default (EAD);
- loss given default (ratio) (LGD);
- probability of default (PD) for the relevant period.

When items are recognized the 12-month ECL is considered. This is arrived to using the 12 month PD, reflecting the probability of default occurring in the next 12 months (referred as 'Stage 1'). This loss is considered without lowering the gross carrying amount of the instrument but a contra-active asset is used (allowance). The gross carrying amount (i.e. calculated without ECL) of the asset remains unchanged.

If the credit quality of the asset significantly deteriorates, the instrument is reclassified into Stage 2, where impairment loss is calculated based on expected credit losses determined in accordance with probability of default during the whole lifetime of instrument. Impairment is recorded in profit or loss, without deduction of gross carrying amount.

It is assumed that the credit quality of the asset is deteriorated when any of following conditions is met or based on assessment of the management this is occurred.

- the contractual cash flows are more than 30 days past due ('DPD 30 days rule'), excluding that case, when the delay has another reason. Regardless DPD 30 days rule, increase in risk shall be assumed, if based on market information the financial status of the partner is deteriorated, that can cause shortfall if cash flows.

It is assumed that there is significant deterioration in the credit quality if any of the following situations exist:

- severe financial difficulties of the issuer or the borrower;
- breach of the contract, missing repayment of capital or pricipal repayment;
- renegotiation of the contract or other reliefs due to the financial difficulties of the counterparty;
- it becomes probable that borrower will be subject to liquidation or other similar reorganizational procedure
- disappearance of an active market
- it can be concluded that the contractual cash flows are not going to be collected.

If the credit quality of the asset deteriorates even further – so the asset becomes impaired – the item will be classified into Stage 3, in that case the item's carrying amount is directly deducted with any previously recognized accumulated impairment loss.

It is considered that an item is 'defaulted' if the contractual cash flow are 90 days past due ('DPD 90 days rule') excluding that case, when the delay has another reason. Regardless to DPD 90 days rule, default can be determined if market conditions suggest the defaulted status may be concluded earlier.

The following signs are considered to be deteriorations in the credit quality and to be impaired:

- market data
- change in the economic environment
- independent rating agencies
- comparable data
- conclusions of the risk assessors
- forbearance
- payment behaviour

If the quality of the financial asset later improves the asset may be reclassified back from Stage 3 to Stage 2 and from stage 3 to Stage 1.

For certain individually small balance receivables ECL is calculated on a collective basis. In the case of accounts receivables the simplified method is applied, where immediately the lifetime ECL is charged but there is no continuous tracking of credit quality.

For this purpose the Group splits the accounts receivables into two portfolios: receivables from the gas activity other account receivables.

The ECL is determined using the following ratios:

Past due	**ECL ratio**
Less than 90 DPD	1%
Between 90 – 180 DPD	50%
Over 181 DPD	100%, or individual measurement

For the gas portfolio:

Past due	**ECL ratio**
Less than 90 DPD	0,001%
Between 90 – 180 DPD	1%
Between 181 – 365 DPD	25%
Between 366 – 550 DPD	90%, or individual measurement
Over 551 DPD	100%, or individual measurement

If ECL decreased, reversal of impairment loss shall be recognized in profit or loss (decreasing the expected credit loss expense).

e) Impairments of non-financial assets and identifying CGUs

The Group tests its significant assets for impairment each year. Testing consists of two stages. The first stage is to examine whether there are signs indicating that the assets in question are impaired. The following are signs that a given asset is impaired:

- damage;
- decline in income;
- unfavourable changes in market conditions and a decline in demand;
- increase in market interest rates.

Should there be any indication that an asset is impaired, a calculation which allows the recoverable amount of the asset to be determined is performed (this is the second step). The recoverable amount is the higher of the fair value of the asset reduced by the cost of disposal and the present value of the cash flows derived from continuous use.
If the value in use of a group of assets cannot be determined as it does not generate any cash flows itself (it is not in use), the test is performed with respect to the cash-generating units (CGUs).

Firstly, the impairment is determined on the level of the individual asset (if possible).

If the value in use can only be determined with respect to the CGUs and impairment needs to be accounted for, impairment losses are recognized as follows:

- firstly, damaged assets are impaired;
- secondly, goodwill is reduced;
- thirdly, the remaining amount of impairment losses are split among property, plant and equipment (PPE) and intangible assets in the CGU in proportion to their carrying amount prior to impairment.

The value of assets may not drop below their fair value reduced by their individual cost of disposal.

Impairment testing is performed by the Group at the year-end or when it is clear that impairment needs to be recognized.

The impairment – in case of changes in the circumstances – may be reversed against net profit. The book value after the reversal may not be higher than the book value if no impairment loss was recognized previously.

The Group concluded that it has two CGUs. The CGUs are represented by the legal entities therefore the first CGU is the depository and specialized financial institution activities and other one is the CCP activity.

f) Property, plant and equipment

Property, plant and equipment are stated at cost less accumulated depreciation and impairments, if any. Depreciation is calculated using the straight-line method at rates calculated to write off the cost of the asset over its expected economic useful life.

Property, Plant and Equipment	Depreciation
Rented property	In accordance with rental contract, but 6% as minimum level
Electronic networks, wires	8%
Computing devices	25%
Photocopiers, faxes, telephones	25%
Mobile phones	50%
Vehicles	20%
Office machines	33%
Furnitures	14,5%

Expenditures incurred to replace a component of an item of property, plant and equipment that are accounted for separately, including major inspection and overhaul expenditures, are capitalized. Other subsequent expenditures are capitalized only when they increase the future economic benefits embodied in the item of property, plant and equipment. All other expenditures are recognized in the statement of comprehensive income as expense as incurred.

g) *Right-of-use-asset (ROU)*

The Group discloses the assets acquired through a lease transaction as a right-of-use asset. The ROUs are subsequently measured using the cost model and the amortization of this asset is mostly based on the contractual period. The ROUs are tested for impairment using the regulation of IAS 36. The ROU is presented together with the asset group of which the underlying asset belongs to. The ROUs are disclosed separately in the Notes.

The Parent subleases some of the items to the subsidiary. This sublease is eliminated on consolidation.

h) *Intangible assets*

Intangible assets are stated at cost less accumulated depreciation and impairments, if any. Depreciation is provided using the straight-line method at rates calculated to write off the cost of the asset over its expected economic useful life.
For software, valuable rights and interests 25% depreciation rate is used on a straight-line basis.

The Group does not amortize those intangible assets that are not yet ready to use.

When the Group develops software to support the activities they decide about the eligibility of the capitalization according to the following criteria:

- the project is technically feasible
- there is an intention to complete the project
- the Group is able to use the asset (or sell it)
- the software will generate future economic benefits
- the resources needed to finish the projects are available
- the cost of the project is identifiable.

These criteria are also taken into consideration when the software is developed by external party, but it is coordinated by the Group.

If the Group acquires intangible assets with indefinite useful life the asset will be subject to annual impairment testing.

The intangible assets include a purchased customer list which was determined to be an indefinite useful life asset, so no systematic amortization was charged for that asset. The asset is tested for impairment annually. The impairment is charged when the relationship with the customer is no longer ongoing.

i) Trading on gas market

Based on the principle of the anonymity of the customers and the suppliers on the daily natural gas and capacity trading market, the transactions are made with the participation of KELER CCP. KELER CCP stands between the counterparties as a technical partner (customer and supplier) during the buying and selling transactions. The inventory of gas held by KELER CCP is always zero at the end of a day. Therefore, buying and selling of the gas is recorded by net method settlement in the Consolidated Statement of Comprehensive Income while in the accounts in Consolidated Statement of Financial Positions (receivables-liabilities) it is recorded gross.

j) Trading on energy market

KELER CCP as a general clearing member of European Commodity Clearing AG (ECC) maintains positions and clears the cash side of the trades to it's non-clearing members towards ECC. KELER CCP receives all relevant information from ECC that is acting as central counterparty of all trades of the power market, and KELER CCP does guaranty all account transfer according the received information between ECC and the non-clearing members.

k) Sale and repurchase agreements and lending of securities

The sale and repurchase agreement ("repo") do not qualify for derecognition under IFRSs, so these items – which are legally considered sold – remain recognized in the financial statements and a liability is recognized embodying the settlement liability in the future periods. Analogically, reverse (passive) repo transaction not results recognition, instruments acquired under reverse (passive) repo are not recognized in the statement of financial position, but a receivable is recognized (debt instrument) together with the related interest income over the period of the repo agreement. The difference between the purchase and selling price is recognized as interest by the Group. Repos between the Group entities are eliminated in the consolidated financial statements. The ECL requirements defined by IFRS 9 are applicable for all outstanding receivables from repo deals, considering the credit quality of the underlying security.

The account rules to security lending agreement are similar to repo agreement, i.e. those do no result derecognition. Thus, security lent in the frame of lending deals for customers are no recognised from Consolidated Statement of Financial Position.

l) Treatment of differences due to not identical trading days

In certain cases the trading day on the markets are not identical (ie. some markets do trade on certain days, some markets are closed – especially around the yearend). This situation may lead to certain transactions on the clearing market not accounted for fully (ie. the transaction is settled with the CCP but not settled with the CCP's client on the same day or vice versa), differences arising from these technical issues are accounted for as receivables and payables. Those items are considered as financial assets and liabilities carried at amortized cost.

m) Revenue recognition

- **Fee revenue**

The Group realises revenue from its guarantee, clearing and depository service providing activities (including clearing on the gas and electricity market), such revenue is recognized when these services are performed.

The performance obligations (PO) of the Group are not complex, so all revenue are accounted for in the period when the service was rendered or the goods were sold (derecognition).

If the Group acts as an agent (as defined by *IFRS 15 Revenue from Contracts with Customers* ("IFRS 15")) in a transaction, the revenue and the related expense is presented on a net base.

- **Interest income**

Interest income is recognized in the profit or loss for all interest bearing instruments on an accrual basis using the effective interest method under IFRS 9.

- **Trading activity**

Sales income is recognized on the trading day when the actual sales (and purchase) occur. See more details above for trading on gas and energy market.

- **Non-refundable fees (received in advance)**

The Group received two non-refundable upfront payments which was invoiced close to signing the contract (AIX and NCLE project). The Group assessed if these fees are in connection with a future performance obligation or an already completed performance obligation. If it is a completed performance obligation the fee will be taken to income otherwise it will be recognized as a liability.

n) Income taxes

The Entity assess on tax-by-tax basis if the a legally payable tax qualifies for income tax under IAS 12 Income Taxes ("IAS 12") standard.

Income tax in the Consolidated Statement of Comprehensive Income for the year comprises current and deferred taxes. Income tax is recognized in the profit or loss, except to the extent that it relates to items recognized in other comprehensive income, in which case it is recognized there.

Deferred income tax is recorded, using the balance sheet method, for all temporary differences arising between the tax bases of assets and liabilities and their carrying values for financial reporting purposes. The amount of deferred tax is recorded based on the expected manner of realization or settlement of the carrying amount of assets and liabilities, using tax rates enacted or substantially enacted at the end of the reporting period.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted at the end of the reporting period, and any adjustment to tax payable in respect of previous years.

A deferred tax asset is recognized only to the extent that it is probable that future taxable profits will be available against which the asset can be utilized.

The Group considers all taxes that are charged to any level of profit or loss to be income taxes and other taxes are presented separately from income taxes.

o) Provisions

A provision is recognized when the Group has a legal or constructive obligation as a result of a past event, and it is probable that an outflow of economic benefits will be required to settle the obligation.

The Group identified an asset retirement obligation (ARO) in connection with the ROU. The ARO is identified, since when the Group moves out from the building the original circumstances must be restated. The estimated amount of this liability was recognized as provision. The discount on this provision was unwinded and the financial expense was debited.

p) Financial guarantee contract liability

The nature of the activity of the Group requires to cover all the risk that are coming from default events (i.e. that KELER CCP must settle the compensation of the transaction even if one of the parties of the clearing agreement is unable to pay/act). To deal with the statistically uncovered exposure the Group recognizes a financial guarantee contract liability based on the available collateral and the probability of a loss event regardless how small this probability is.

q) Guarantee fund liability

As an element of the guarantee system, KELER CCP operates several collective guarantee funds. The purpose of the guarantee fund is to reduce the risk arising from default or failure of cleared and guaranteed transactions made by the Clearing Members. Contributions of the Members are kept in cash. These funds are recognized as liabilities and are measured at amortized cost.

r) Statutory reserves

The statutory reserves are items which are recognized through as a transfer from other elements of the equity based on local legislation. The recognition or the release of such items does not affect the other comprehensive income.

i. General reserve

In accordance with Section 83 of Act CCXXXVII of 2013 on Credit Institutions and Financial Enterprises, a general reserve equal to 10% of the net after tax income is required to be made in the Hungarian statutory financial statements. The recognized general reserve is directly transferred from the retained earnings.

ii. General risk reserve

Under Section 87 of formerly effective Act CXII of 1996 on Credit Institutions and Financial Enterprises, a general risk reserve of maximum 1.25% of the risk-weighted assets was made until 31 December 2013. This statutory reserve was recognised through as a transfer from retained earnings. Since 1 January 2014, there is no legal right to record such type of reserve and formerly recorded reserves can be used to cover unexpected credit losses only.

s) Hedging

The Group does not establish separate accounting policy to the accounting of hedge relationships, any potential hedge relationship is treated in accordance with general rules of IFRS 9.
(Note: the Group has no hedge relationship currently)

t) Statement of cash flows

Information about the cash flows of the Group is useful in providing users of financial statements with a basis to assess the ability of the Group to generate cash and cash equivalents and the needs of the Group to utilize those cash flows.

For the purposes of reporting cash flows, cash and cash equivalents include cash, balances, certain treasury bills and government bonds and placements with the National Bank of Hungary, except those with more than three months maturity from the date of acquisition.

u) Events after end of the reporting period

Events after the reporting period are those events, favourable and unfavourable, that occur between the end of reporting period and the date when the financial statements are authorized for issue. These events can be adjusting and non-adjusting events.

All adjusting events after the end of reporting period have been taken into account in the preparation of the consolidated financial statements of the Group. The material non-adjusting events after the end of the reporting period are presented in Note 44.

v) Off balance sheet items

KELER CCP is entitled to require a collateral from its Clearing Members using its central counterparty services. The form of collateral can be cash, foreign exchange, and securities. As clearing member of European Commodity Clearing AG (ECC) KELER CCP has to provide collateral for ECC regarding the settlement of power market position of power market non-clearing members of KELER CCP.

Furthermore, the deposited physical securitizes are considered to be off balance sheet items.

NOTE 4: FINANCIAL RISK MANAGEMENT

a) Introduction and overview

KELER is subject to the provisions of CSDR as a central securities depository which besides core services, it provides non-banking and banking-type ancillary services, therefore it shall comply with the Tpt. and Hpt. as well. KELER's risk assumptions are exclusively related to the services authorized by the CSDR.

KELER's risk management principles are approved by the Board of Directors.

Changes have been made in the organizational structure of risk management. During 2019, KELER outsourced its risk management tasks to KELER CCP, KELER CCP undertook daily risk management tasks in line with a separate administrative order, however responsibilities and decision-making was performed by KELER's Chief Risk. As of January 1, 2020, the outsourcing of the risk management function has been ceased, and a separate risk management unit, lead by the Chief Risk Officer, operates in KELER, directly subordinated to the CEO. Accordingly, in the following chapters KELER Risk Management Department is used consistently, instead of the former KELER CCP Risk Management Department.

Risk management function is separated from business.

The Group is exposed to the following main risk types arising from its operation and strategy:

- credit and counterparty risks,
- market risks,
- operational risks,
- general business risks,
- winding-down or restructuring risks
- compliance risk

The exposures of the Group to the above risk types, the objectives, policy and procedures to measure and manage risks, and capital management by the Group are discussed below. The risks that are managed separately due to the different operation of the central securities depository and the central counterparty are covered separately for both entities.

Regarding risk management the compliance of the provisions of the CSDR[1] has been changing demands in recent years. According to the requirements of the CSDR, KELER must be re-authorized for its central counterparty and banking services, currently still in progress. Hereinafter we refer to the activity of KELER as the central securities depository function, including the central securities depository and ancillary credit institution functions also.

As of 2014, KELER CCP operates as a qualifying central counterparty licensed under EMIR; thus, it complies with EU and Hungarian legislation regulating qualifying central counterparties. Hereinafter we refer to the activity of KELER CCP as the central counterparty function.

Changes in capital requirement stemming from different risk types are presented in the chapter about Capital Management.

Besides the organisational change, the following events, involving KELER's risk management, took place in 2019:

- Based on Article 48 (1) of RTS 2017/392, supplementing the CSDR, KELER operates a Risk Management Committee from 2017, which has been expanded in 2019. The existing Operational Risk Management Committee and the new Risk Committee established under the CSDR have been merged in order to perform their duties more effectively as a committee. The Risk Committee is a comprehensive body dealing with the risks of KELER. Its purpose is to identify the risks within its sphere of competence and to recommend how to deal with them. It reports its activity to KELER CEO and KELER's Board of Directors. The role of the Risk Committee is to inform KELER's Chief Executive Officer and KELER's Board of Directors of current and future overall risk tolerance and strategy. As part of the briefing, it can formulate opinions and make suggestions as well. The Committee met three times in 2019, and a separate briefing was prepared for the Board of Directors on its annual work.
- At the end of 2019, the system supporting the daily risk management tasks of KELER was set in operation. The purpose of the KELER Depository Risk Analysis System is to replace part of the daily manual work. With the help of the system, the previous processes were transferred to an integrated web based environment.

[1] Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories and amending Directives 98/26/EC and 2014/65/EU (CSDR)

b) Investment risk

Two subcategories are defined under investment risk:
- credit and counterparty risks,
- market risks.

i. Credit and counterparty risk

Credit risk is the risk of loss impacting profitability and the capital position arising from default (or failure to perform as contracted) by the counterparty, i.e. from default on (on or off the balance sheet) liabilities towards the Group.

Counterparty risk is the potential loss arising from failure by the counterparty to meet contractual obligations before closing the transaction (final settlement of cash flows). As a type of credit risk, this risk typically relates to derivatives, repo and other securities financing transactions.

The various sub-types of credit and counterparty risks are introduced in the following chapters. Due to the activity undertaken by the Group, there is no risk taking arising from special lending exposures and FX lending. Off-balance sheet items related risks are considered under credit and counterparty risks.

i. <u>Credit risk of the issuer of securities</u>

Central securities depository function

KELER's portfolio consists exclusively of Hungarian forint denominated government securities. The Hungarian forint denominated exposure towards the Hungarian State is considered risk-free, so no capital requirement is required.

ii. <u>Credit and counterparty risk related to Treasury activity</u>

Central securities depository function

Contrary to a traditional commercial bank, in the case of KELER credit risks are not considered complex and decisive; accordingly, this is not the risk with the greatest share in the capital requirement.

Pursuant to Article 46 of the CSDR, KELER applies the following investment policy:

1) KELER holds its financial assets at central banks, authorised credit institutions or authorised CSDs.

2) KELER has prompt access to its assets, when required. Financial resources are invested in cash or in highly liquid financial instruments with minimal market and credit risk. Investments are also capable of being liquidated rapidly with minimal adverse price effect (Hungarian government securities).

3) Investments that do not meet the aforementioned provisions (i. e. holdings), are fully deducted from own funds.

4) KELER also assures that investments remain within acceptable concentration limits.

In line with the above requirements the central securities depository can use the available funds of the shareholders' equity to perform the most common deal types that are the following:

- buy/sell of fixed rate Hungarian government securities denominated in HUF
- security repo and reverse repo deals
- FX transactions
- O/N, T/N or S/N interbank and MNB deposit placements,
- interbank and MNB loans.

Limiting the risks inherent in KELER's treasury activities beyond the regulatory constraints of the partners is comprehensively provided by the partner rating system, the daily monitoring and internal limit system. As part of daily monitoring, KELER Risk Management informs the Assets and Liabilities Committee on limit violations through KELER CRO. Regarding the operation of the treasury limit system and possible limitations, KELER's Board of Directors receives regular information in the framework of quarterly measurements performed by KELER Risk Management Department. KELER's CRO regularly informs the Board of Directors about the operation of the limit system and the limit breaches.

The central securities depository determines the capital requirements for credit and counterparty risks at both regulatory (CSDR, EBA RTS[2] supplementing CSDR , CRR[3]) and ICAAP-ILAAP level. On regulatory level KELER applies the standard method pursuant to CRR, while under ICAAP-ILAAP it uses a method similar to the standard method applied under the regulatory level to calculate capital need, relying on the results of its own internal rating also to determine risk weights. There is no difference in determining the value of exposure under the two methods.

Central counterparty function

KELER CCP clearing members include credit institutions, investment firms and commodity exchange service providers in the capital market, in the energy markets cleared by the ECC and the gas markets (TP, CEEGEX) power and gas traders are the direct clients of KELER CCP. For KELER CCP as central counterparty, counterparty risk is financial (or securities) default by its clearing members and non-clearing members (in the energy market). Besides, exposures and liabilities related to fees may also arise due to the operation of KELER CCP.

In case of clearing member and energy market non-clearing member default on spot market purchase price, derivative market variation margin, KELER CCP as central counterparty is required to compensate non-defaulting participants in line with the default process, by using collaterals and guarantees, and its shareholders' equity also if

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[2] Commission-delegated Regulation (EU) 2017/390 of 11 November 2016 supplementing Regulation (EU) No 909/2014 of the European Parliament and of the Council with regard to regulatory technical standards on certain prudential requirements for central securities depositories and designated credit institutions offering banking-type ancillary services (EBA RTS)
[3] Regulation (EU) No 575/2013 of the European Parliament and of the Council on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 (CRR)

needed. Therefore, counterparty risk monitoring and management are of outstanding importance to enable the central counterparty to assess potential exposures and have the appropriate amount of capital and liquid assets to compensate non-defaulting parties.

KELER CCP rates regularly capital market clearing members, gas market clearing members and energy market non-clearing members according to objective (capital, liquidity and profitability indicators) and subjective aspects determined in its internal rating methodology. If the rating of a counterparty deteriorates significantly, KELER CCP pays special attention to the positions taken and uncovered risk, and based on individual assessment, on the grounds of perceived risk increase, it may impose additional financial collateral on the counterparty concerned.

The elements of the guarantee system are designed to cover credit risk arising from default by KELER CCP clearing and non-clearing members; no separate capital requirement is made. Due to the operation of the guarantee system, when the collateral requirement of a portfolio is determined, the counterparty risk factor is not quantified. In order to manage the resulting risk of negligible amount the existence of which cannot be examined historically, KELER CCP makes financial reserve in line with the bucket method. The part uncovered by the risk measure confidence level used to calculate collateral instruments and the maximum probability of occurrence were taken into account to determine financial reserve.

In line with the requirements of EMIR, KELER CCP calculates capital requirement on fee and trade receivables related to its credit risks based on CRR.

iii. <u>Risk of CSD links and account managing institutions</u>

Central securities depository function

KELER has relationship with several types of institutions by reasons of its involvement in the cross-border transactions and in relation to energy market performances that are intermediated for settlement by KELER CCP; consequently, exposures are generated to these institutions.

KELER's foreign exchange account balances and exposures to CSDs that possess a banking authorization are determined on the basis of the business activities of the clients that use its settlement services; consequently, KELER has limited and indirect influence only due to its business activities.

A reliable and stable background and a good reputation are the key criteria when selecting CSD links, indirect relationships and intermediaries. In addition to the usual ratings, the result of the partner questionnaire, if necessary, and the credit rating of the country where the registered office of the institution is located are also taken into account.

The quantification of the capital requirement is presented in chapter Credit and counterparty risk related to Treasury activity.

iv. Fee and other receivables

Central securities depository function

KELER is not exposed only to the above activities (e.g. investment and cross border activities). Because of the services KELER provides, financial claims may arise (even regularly) in regard to suppliers and employees. The aforementioned partners may also cause financial. The financial or other default of the partners listed above may cause financial loss to KELER or adversely affect the operation of KELER (e.g. current or future financial claims, defaults or default, damage).

KELER creates relationship with these partners in the course of its operation and the risk taking related to these partners is consciously limited by KELER, for example through the rules for the selection of suppliers. As KELER does not perform a counterparty rating in respect of such partners, no counterparty limits are set.

v. Credit risk of holdings

Central securities depository function

KELER as central securities depository has a qualifying interest (99.81%) in KELER CCP Ltd., and has minimal share in the Association of National Numbering Agencies (ANNA). Both are fully deducted from the own funds of the central securities depository. The part deducted from the own funds is not considered when capital requirement is determined, other exposures to KELER CCP are managed as credit and counterparty risks, as exposures to the company. Regarding ANNA, KELER only assumes the risk of non-significant fees representing the holding, the risk taking is up to the annual membership fee.

As the majority owner of KELER CCP, KELER assumes indirect risk for the contractual liabilities of KELER CCP towards contracted clearing members and energy market non-clearing members arising from the activity of KELER CCP as central counterparty.

As the holding is fully deducted from own funds, no further capital requirement is required.

Central counterparty function

KELER CCP does not hold any investments.

vi. Intra-day credit risk

Central securities depository function

Pursuant to Section C b) of the CSDR Annex, KELER provides a cash credit line to KELER CCP, under full coverage.
KELER provides the intra-day-cash credit line to be repaid on the next business day at latest, in accordance with KELER's actual conditions of acceptance of securities and currencies collateral document.

vii. Off-balance sheet exposures

KELER's off-balance sheet exposure arises on the one hand from the intraday cash credit line granted to KELER CCP, and on the basis of the loan provided explicitly for its subsidiary, KELER CCP. In addition to the above, off-balance sheet exposures arise due to the guarantee KELER offers for the rental of the office.
The CRR contains the rules pertaining to putting off-balance sheet items on the balance sheet. As a result, the capital requirement is determined with the help of the weights specified in Article 111 of the CRR.

viii. Large exposure

Large exposure is defined as the risk taking at least ten percent of eligible capital for a customer or group of customers as per Article 387-403 of CRR.

Central securities depository function

KELER CSD manages and monitors large exposures on a daily basis in line with the provision of CRR. Excessive large exposures are maximized by the limits set based on the available own funds. In case of limit violation on trading book items, additional capital requirement is calculated as required in Article 4. of CRR 397-398.

ix. Credit risk of default exposures

Central securities depository function

KELER defines in its internal policies which exposures are considered defaulted. In case of defaulting partners, KELER assigns a higher risk weight to the counterparty, thus determining additional capital requirement.

Due to the lack of classical banking type activities, KELER has only a limited amount of credit exposure.

On a voluntary basis, KELER applies the definition of default according to CRR and the related risk weighting to claims.

x. Residual risk

Central securities depository function

Residual risk is the risk of large scale depreciation or restricted enforceability of credit exposures related collaterals, or in other words the risk that the recognized credit risk mitigation techniques applied by the credit institution prove to be less efficient than expected. For certain trades (e.g., repo trades), the central securities depository can accept collateral. In practice, credit risk mitigation instruments are accepted for repos, and the cash-credit line offered for KELER CCP only.

In the case of KELER, this risk arises indirectly, through the holding, related to the collateral portfolio of KELER CCP. KELER CCP manages this risk satisfactorily, with haircuts in line with legislation. KELER does not determine separate capital requirement for residual risks.

Central counterparty function

As part of the guarantee system operated by KELER CCP, the clients of KELER CCP are required to provide collateral. Instead of using the full market value, the collateral portfolio is taken into account after deduction of the haircuts determined in the valid KELER CCP condition lists on accepting securities and foreign currencies, this is a risk management technique to eliminate residual risk. The applicable condition list of KELER CCP determines the types of eligible collateral also; thus, jointly with the use of haircuts, residual risk is minimized.

The central counterparty does not determine separate capital requirement for residual risks either.

xi. Concentration credit risk

Risk concentration is the risk exposure that intra-risk or inter-risk across various risk types can lead to loss that jeopardizes the business as usual operation (usual continuous operation with reasonable profits) of the entity or makes a material change in the risk profile of the entity.

Central securities depository function

Credit risk concentration towards individual clients and trade partners is a distribution of receivables when default by a group of relatively small number of clients/partners or by a larger group of clients/partners, attributable to common reason/reasons puts at risk the business as usual operation (usual continuous operation with reasonable profits) of the entity. The term “clients and trade partners” covers not only individual clients/partners, but also the groups of individual clients/partners that are closely connected (through ownership and/or funding). It has two major groups:

- concentration of risk taking to individual client/client group (large exposure): the source of risk is default on exposure to a relatively small group of clients or partners,
- sector concentration: risk of joint default due to common reason/reasons.

KELER identified relevant credit concentration risks in the following areas:

- concentration of interbank treasury operations,
- investment concentration,
- concentration of exposures to CSD links and foreign exchange account managing institutions and, consequently, country risk concentration,
- concentration of exposures to KELER CCP.

Generally, CRR large exposure requirements for measuring and managing credit risk concentration appear to be sufficient with regard to the scope of counterparties and activities, which is limited by law. Credit counterparty credit risk stemming from interbank treasury activity is managed by the internal treasury limit system focusing on the partner and partner group limit.

Investment concentration risk can be identified on the asset side due to the high proportion of government securities. However, no concentration limit is set for exposures to the state and central banks. Currently, the concentration of instruments in the entire securities portfolio is monitored on a daily basis by KELER RM using the Herfindahl – Hirschman Index (HHI).

The volume of credit and country risks concentration resulting from relationships with CSD links and account managing institutions are determined by the turnover, which KELER is unable to limit. Concentration is limited by country risk, regulatory capital and ICAAP-ILAAP credit risk capital requirements.

The concentration of exposures to KELER CCP consists of several different types of exposures, mainly from the shareholding in KELER CCP, and from the agreements between KELER and KELER CCP. The management and control of the above risks is achieved through ownership control, the rating of the share in KELER CCP and the regular monitoring and analysis of credit line usages. KELER is indirectly involved in the collateral portfolio of KELER CCP and in the concentration risks associated with the positions taken by its clearing members and members of the energy market clearing members. In the latter two cases, the concentration risk - and its management - is not reported by KELER, only by KELER CCP.

Central securities depository function does not establish separate capital requirement to concentration risk.

Central counterparty function

Concentration risk related to the central counterparty activity of KELER CCP arises in two ways. On the one hand, due to the concentration of positions taken by KELER CCP clearing members and energy market non-clearing members, on the other hand it is due to the concentration of collaterals on the other.

The market and capital position limit is designed to manage risk concentration related to counterparties towards which KELER CCP as central counterparty undertakes guarantee in exchange settlements. If these limits are exceeded, additional financial collateral can be collected in line with the General Business Rules of KELER CCP due to perceived risk increase to mitigate risks arising from increased concentration.

KELER CCP applies concentration limits in line with ESMA TS 153/2013, among others by individual issuer, asset type, to the concentration of securities in the central counterparty collateral portfolio.

KELER CCP does not make capital requirement for concentration risks.

xii. Country risk

Country risk is the risk of loss generated by an event (economic, political, etc.) occurring in the country, controllable by the country (government) given and uncontrollable by the partner of KELER.

Central securities depository function

Exposures to foreign equity, international transactions, and funds placed with foreign counterparties are considered foreign exposures based on the relevant legislation and KELER's risk-taking willingness. KELER is indirectly exposed to the country risk of KELER CCP's receivables through its ownership in KELER CCP.

KELER treats exposures to branches operating in Hungary as foreign risk exposure. KELER applies conservative limits depending upon the external credit rating of the country and the amount of own funds; moreover, KELER applies alert levels to its exposure to different countries. Additionally, positions in foreign currencies are monitored daily.

Central counterparty function

The country exposure of KELER CCP increases gradually due to the strategy followed as KELER CCP provides services to foreign counterparties and has multiple connections with international settlements. Some of the foreign counterparties are clearing members that are considered foreign legal entities as they transformed into branches, and for this reason the country risk of the parent company is to be taken into account also. Additionally, foreign clearing members/non-clearing members, partly related to the settlement of the MTS market, are also part of the KELER CCP counterparty group. Several energy market non-clearing members are registered abroad. Related to energy market clearing, KELER CCP has account management relationship with Citibank Frankfurt, with Clearstream Luxembourg and OTP Serbia and clearing relationship with ECC, through this link KELER CCP is involved in foreign energy market clearing also.

In terms of country risk, the largest exposure is towards Germany due to the exposures to ECC and Citi Frankfurt. Germany is an EU member state and a superpower, with safe background. KELER CCP has no material exposure to non-EU member states currently and such exposure is not expected in the future either. Risks due to existing country risks are managed in the guarantee system.

KELER CCP does not make capital requirement for concentration risk.

ii. Market risk

Market risk is the risk that the real value of the future cash flows of a financial instrument will be volatile due to changes in market prices. Market risk reflects the risks associated with interest-bearing assets, shares, indexes and, it may include foreign exchange risk and commodity risks as well.

i. Trading and non-trading book interest rate risk

Central securities depository function

KELER runs HUF interest rate risk and limited foreign exchange risk only.

KELER as central securities depository applies various limits to monitor market risks that are related to the following risk types: non-trading and trading book interest rate risk, FX rate risk, and full open FX position risk.

Market risk management involves daily measurement, monitoring, reporting on the one hand, and periodic stress tests on the other.

KELER manages separately the market risks arising in the trading and non-trading books.

Since 2018, KELER has changed the classification of government securities in its portfolio, so the trading-book consists only of discount treasury bills.

The non-trading book portfolio typically included interbank trades and MNB loans/deposits and foreign currencies, and the government bonds reclassified from the trading-book.

The following tables show the structure and changes in the trading and non-trading books as of 31 December 2018 and 31 December 2019, in HUF millions:

Trading book	2019	2018	Change
Discount treasuries	21 484	32 376	-33,6%
Total	21 484	32 376	-33,6%

Non-trading book	2019	2018	Change
Hungarian government bonds	17 392	15 061	15,5%
Deposit with the central bank	10 150	9 945	2,1%
Interbank deposit	9 000	3 000	200%
Total	36 542	28 006	30,5%

Capital requirement for trading book interest rate risk / position risk is determined in line with the maturity-based calculation standard methodology on regulatory level (general position risk, CRR Article 339). Capital requirement on ICAAP-ILAAP level is calculated with modified duration based interest rate sensitivity.

The central securities depository determines capital requirement for the interest rate risk of non-trading book items in line with ICAAP-ILAAP only, the methodology is identical to the ICAAP-ILAAP methodology of trading book capital requirement calculation.

The following tables illustrate changes in interest rate sensitivity of the trading and the non-trading books in 2018 and 2019, based on the last day of the month, in HUF millions:

Trading book	2019	2018
January	162	705
February	151	184
March	169	204
April	149	205
May	150	194
June	157	213
July	128	188
August	104	198
September	81	171
October	71	140
November	82	131
December	93	148

Non-trading book	2019	2018
January	413	2
February	405	509
March	400	474
April	380	535
May	377	508
June	367	482
July	360	475
August	355	460
September	342	446
October	333	434
November	611	433
December	592	424

In addition to daily capital requirements calculation, daily value at risk (VaR) for the trading and non-trading book portfolio is calculated daily. VaR calculation is based on 99% confidence level and 1 day relative change.

The following tables show VaR changes in 2018 and 2019, based on the last day of the month, in HUF millions:

Trading book	2019	2018
January	15	33
February	14	2
March	10	3
April	7	5
May	7	13
June	17	28
July	9	20
August	7	24
September	6	13
October	3	7
November	1	8
December	2	12

Non-trading book	2019	2018
January	50	0
February	42	39
March	43	40
April	45	36
May	36	55
June	32	78
July	25	79
August	22	82
September	23	76
October	21	71
November	51	59
December	58	56

ii. Foreign exchange interest rate and exchange rate risk

Only the own FX positions (FX account balances) represent FX risk for KELER, clients take the FX rate risk of foreign currency balances owned by clients and deposited in the accounts of the central securities depository. The primary purpose of foreign currency assets held by KELER is to make sure that the services provided by KELER CCP as central counterparty in the guaranteed markets and the international settlement services provided by KELER are secure and seamless and to ensure the related FX conversion service. The amount of the portfolio that can be held at the end-of-day is limited in each currency, thus the amount of risk that can be taken is limited also. FX risk is measured with historic analyses and daily VaR calculation.

Changes in open own FX portfolio and calculated VaR changes in 2019 and 2018, on the last day of the month, in HUF million, are as follows:

	2019		2018	
Date	**Portfolio**	**VaR**	**Portfolio**	**VaR**
January	108	1	91	1
February	126	1	111	1
March	124	1	102	1
April	124	1	117	1
May	115	1	95	1
June	140	1	94	1
July	144	1	98	1
August	185	1	107	1
September	192	2	99	1
October	202	2	107	1
November	201	2	114	1
December	123	1	127	1

Central counterparty function

In the case of KELER CCP, there are several approaches to discuss market risk.

One approach is that related to the operation of the central counterparty a potential default can convert counterparty risk into market risk, upon default by the member concerned KELER CCP has to fund, temporarily or finally, cash/securities or derivative market variation margin with the sales proceeds of existing collaterals or with own resources if the former are not sufficient.

KELER CCP analyzes regularly the market risk of collaterals, i.e. the terms of eligibility: in line with the requirements of EMIR it analyzes monthly that the haircuts applied on eligible instruments are appropriate, if found inappropriate, haircuts are amended, and KELER CCP consults quarterly the Risk Committee on haircut levels. The group of eligible collaterals is in line with the requirements of EMIR.

Additionally, prudent margining is designed to cover the market risk of cleared instruments; the appropriateness of margining is monitored continuously.

Market risk can arise at KELER CCP as a part of own resources, that is the minimum capital requirement under EMIR (7.5 million EUR), is invested in Hungarian government securities, treasury bills that are held until maturity, thus market risk is not material related to these instruments.

As an ECC clearing member, KELER CCP provides guarantee undertaking to its non-clearing members in spot and futures energy market clearing. The entire amount of collective guarantee fund contribution payable to ECC is to be made in euro. Consequently, KELER CCP has a material FX portfolio that is the ECC guarantee fund contribution; however, it does not give rise to real FX rate risk in daily operation, it is not converted to HUF. The contribution to the ECC guarantee fund is deducted when the available capital is calculated.

KELER CCP does make capital requirement for market risk.

iii. Liquidity and funding risks

Central securities depository function

Liquidity is the ability of the entity to fund and meet the increase in assets, expiring liabilities without material unplanned risks. Based on the ICAAP-ILAAP manual liquidity risks can be put into two groups: liquidity and funding risks.

Liquidity risk: the risk that the entities are not able to meet financial liabilities on time within the day, operatively (30 days), in the short (1-3 months) and medium term (3-12 months) or due to related market liquidity risks they can sell balancing capacities at a material loss due to the inadequate depth of the market or other market disturbances. (Market liquidity risk is the risk that the entity is not able to realize positions at appropriate market prices, i.e. market liquidity risk is the risk that a market position cannot be closed at market prices during a short period of time, it can be closed at a worse price only, thus it is required to maintain the position to realize the appropriate market price, which may need depositing or taking liquid assets.)

Funding risk: the risk that in the long term, over the year, entities are not able to meet financial liabilities without unacceptable increase in funding costs. Thus, in the long term, entities cannot keep their funding stable.

The special activity of KELER, in particular seamless settlement requires liquid assets that can be mobilized quickly at all times. Partly due to the former requirement, the assets the central securities depository can keep are strictly regulated by legislation (see Article 46 of CSDR). In addition to legal restrictions, KELER endeavors to select financial instruments that can be sold quickly under normal market conditions if needed and can be used to create intra-day liquidity also. In terms of liquidity risk, the relationship with KELER CCP as central counterparty is of great importance, mainly due to the settlement loan service.

The liquidity risk limits determined by the central securities depository are monitored daily, capital requirement is determined on monthly basis. The Assets and Liabilities Committee discusses the reports. Additionally, a comprehensive report is prepared at least once a year for the KELER Board of Directors.

Central counterparty function

There are two major functions related to which KELER CCP needs liquidity: on the one hand liquidity is needed for guarantee undertaking, the main activity of KELER CCP - typically, KELER CCP is able to provide this liquidity with shareholder's equity. On the other hand, a variable amount of liquid assets is required for the daily operation of KELER CCP. One part of it is represented by the transfer price payable to KELER; the larger part consists of financial liabilities arising from ECC clearing membership. Liquidity needs related to guarantee undertaking may arise several times during a day, in line with market settlement times.

Regarding default related liquidity risk management, EMIR requires the capability to cover the liquidity need uncovered by individual collateral related to the two members with the largest exposures in the market.

The liquidity need expected on the following day and in some cases on later days is analyzed and forecast daily. It is assessed monthly, retrospectively, whether KELER CCP was able to meet the requirement of EMIR to cover the liquidity need arising from the risk of the two largest members uncovered by individual collateral.

KELER CCP does not create capital requirement for liquidity risk.

c) Operational risks

Operational risks are managed at Group level (KELER and KELER CCP – hereinafter Group – joint regulation).

Operational risk means the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events, and includes legal risks (CRR, Article 4, section 52). Operational risk includes legal risk but does not include reputation and strategic risk (Based II, International Capital Framework, 2005.).

According to the ICAAP-ILAAP manual, KELER examines and manages legal, reputational risk and ICT risk under operational risk.

Operational risk measurement and management under ICAAP-ILAAP is based on a Group-wide loss database that is supplemented by expert estimates and the collection of key risk indicators. All organizational units of the Group are to be involved in the collection of operational risk events, the regular assessment, evaluation and mitigation of risks. This way it can be ensured that the operational risk management system covers comprehensively KELER and KELER CCP that are intertwined in terms of operation and activity.

An operational risk management contact person is appointed in each Group unit; this person is responsible for forwarding to the operational risk management officer loss events that the contact person becomes aware of and the key risk indicators collected by its unit. In addition to the system of contact persons, there is a Risk Committee (RC) which is responsible for managing operational risks as well. The Risk Committee reviews quarterly the development of operational risk indicators (KRIs) and discusses developments, makes recommendations on operational risk management to manage or mitigate risks, and monitors the implementation of previous measures.

The reports prepared for committee meetings and the minutes of the meetings that include the action plans were sent to the Supervisory Boards of KELER and KELER CCP. The Boards of Directors of KELER and KELER CCP are provided thorough information annually on the activity of the Risk Committee.

Operational risks within the KELER Group are regularly identified and quantified based on the self-assessment interviews with the organizational units.

Changes in operational risks are monitored through the regular collection of loss data. The regular analysis and reporting to Management of loss events ensures risk monitoring and is the basis of taking risk management measures.

The key risk indicator is an indicator moving parallel with operational risk losses that helps monitor changes in risk exposures. KRIs are collected to ensure the continuous monitoring of operational risks. KRIs are regularly assessed, the Risk Committee continuously monitors KRIs and changes in KRIs over time.
The Group determines operational risk capital requirement at regulatory level based on the BIA model, in terms of internal approach, applies a risk sensitive model that is nearly AMA level.

d) Settlement risk

Settlement risk is the risk that a settlement executed through a payment system is performed in a way other than expected. Settlement risk may include credit and liquidity risk elements also.

Central securities depository function

In the case of the central securities depository function, treasury transactions may have settlement risk involved, the central securities depository manages this risk with the settlement and pre-settlement limits set up in the limit system. Separate limit amounts are determined for HUF settlements and for FX settlements that represent increased risk.

KELER concludes proprietary trades in the OTC market only, the DVP principle is met when possible.

Central counterparty function

In line with the investment policy of KELER CCP, the amount of minimum capital requirement is invested in short-term government securities that are held until maturity. The portfolio includes a few securities; settlement risk upon trade settlement is negligible.

In the case of KELER CCP, no capital requirement is established for credit risk arising from settlement risk.

e) Compliance risk

The Compliance Control function ensures compliance with EU and national legislation, policy guidelines, regulatory recommendations, professional standards, and promotes consistency in the principles and standards set forth in internal regulations.
If a change in the regulatory environment significantly affects KELER's own funds or profitability, this must be taken into account during capital planning.

f) General business risk

Central securities depository function

Pursuant to the provisions of Article 47 of CSDR, the central securities depository must cover general business risks with capital. The EBA RTS provides additional information in this regard that is in line with the requirements of the ICAAP-ILAAP manual. Because of its special position, KELER follows primarily the provisions of the CSDR to determine the capital requirement for general business risks, but at the same time it also takes into account the requirements set forth in the ICAAP-ILAAP manual when identifying applicable scenarios (standard scenario and at least 1 stress scenario). The specified capital requirement is intended to cover losses between normal and stress scenarios. The capital requirement is determined in accordance with Article 6 of the EBA RTS; therefore 25% of the annual gross operating cost and the loss from the business plans are calculated, the higher amount representing the capital requirement.

g) Winding-down or Restructuring Risk

Central securities depository function

Pursuant to Article 47 (2) of the CSDR, KELER must maintain a plan with respect to the following:

a. additional capital increase in case its equity capital approaches or falls below the requirements laid down by law;
b. ensuring the orderly winding-down or restructuring of its operations and services if KELER is unable to raise new capital.

With respect to raising additional capital, KELER's Recovery Plan contains the relevant provisions.

h) Capital management (Regulated institutions' capital management)

Central securities depository function

Besides acting as a central securities depository pursuant to the CSDR provisions, KELER provides non-banking and banking type ancillary services, therefore it shall comply with the applicable provisions of the Hungarian regulation (Tpt., Hpt. and ICAAP-ILAAP manual) and with the EU legislations (CRR) and guidelines related to the operation of credit institutions.
The central securities depository is required to comply with the own funds related requirements of CRR. The calculation of capital adequacy should be determined in accordance with Hungarian Accounting Rules available values.
The own funds of KELER consist of the following components:

- Tier 1 capital (T1):
    - Common Equity Tier 1 (CET1): subscribed capital, retained earnings, unrealized exchange differences on financial instruments (FVTOCI) according to IFRS, general reserves (based on regulation 10 % of profit for the period),
    - Additional Tier 1 (AT1): none,
- Tier 2 (T2):, allocated reserves (currently none)

Intangible assets and the loss of current business year are subtracted from the common equity tier 1 capital (Article 36 of CRR). Furthermore, the amount of the adjustments determined under Article 105 of CRR and, in accordance with Article 46 (4) of the CSDR, the total value of the investments in KELER CCP and ANNA shall be deducted. In addition, any investment that does not comply with Article 46 (3) of the CSDR, including the value of securities blocked until maturity related to the renting of office, should be deducted as well..

KELER does not apply Group level capital adequacy.

The following table shows the calculation of central securities depository own funds and capital adequacy ratio as of 31 December, data in million HUF:

	2019[4]	2018
Subscribed capital	4 500	4 500
Retained earnings	19 210	22 263
FVTOCI reserves	9	27
General reserves	372	267
Tier 1, total	**24 091**	**27 056**
General risk reserves	0	0
Tier 2, total	**0**	**0**
Deductions(-)		
Intangible assets	- 1 138	-849
Limit excess due to investment restrictions	0	0
Value adjustments due to the requirements for prudent valuation	-2	-130
Limit excess due to large exposure taking restrictions	0	0
Other deductions	-6 596	-6 592
Tota deductions	**- 7 736**	**-7 570**
OWN FUNDS	16 354	19 486

Capital adequacy ratio	**2019**	**2018**
CET1 Capital Adequacy Ratio	16,7%	26,0%
Total Capital Adequacy Ratio	16,7%	26,0%

Based on the capital requirements of the central securities depository calculated for regulatory risks and risks defined by ICAAP-ILAAP, KELER Risk Management determines for each day the capital to be created and checks that own funds are sufficient. In light of the current capital position of KELER, no additional intervention is needed.

[4] Non-audited data

The following table details the calculation methodology applied for regulatory and internal capital requirement for certain risk types:

Risk	Regulatory	ICAAP-ILAAP
Credit and counterparty risks	Standard method	Based on own weights, similarly to the regulatory method
Intra-day credit risk	Based on article 8 of EBA RTS	Based on own weights, similarly to the regulatory method
Risk of credit obligation exposures	Based on article 127 of CRR	Based on the ICAAP-ILAAP manual (risky portfolios)
Off-balance sheet items	Based on article 111 of CRR	Based on own weights, similarly to the regulatory method
Position risk / Trading book interest rate risk	Position risk: maturity based approach	Based on interest rate sensitivity
Non Trading book interest rate risk	-	Based on interest rate sensitivity
FX exchange rate risk	8% of the total net position of foreign currencies owned, if the net open position reaches 2% of own funds.	Supervisory VaR model
Liquidity and financing risk	-	The sum of the liquidation cost of the securities portfolio calculated on a 6 month GARCH basis weighting
Operational risk	BIA method	Based on actual losses, theoretical events and scenario results, with Monte Carlo simulation and with VaR
General business risk	Based on article 6 of EBA RTS	Equivalent to the regulatory method
Winding-down or restructuring risk	based on article 7 of EBA RTS	Equivalent to the regulatory method

KELER created the following capital requirements on 31st December 2018 and 31st December 2019[5]:

2019 **Risk**	**Capital requirement, regulatory (CSDR+CRR)**	**Capital requirement, internal (ICAAP-ILAAP)**
Position risk/Trading book interest rate risk	89	140
Credit and counterparty risks	1 323	1 077
FX rate risk	0	13
Operational risk	903	689
Non-trading book interest rate risk	0	888
Liquidity and financing risk	0	83
General business risk	1 227	1 227
Winding-down or restructuring risk	3 272	3 272
Total	**6 815**	**7 389**

2018 **Risk**	**Capital requirement, regulatory (CSDR+CRR)**	**Capital requirement, internal (ICAAP-ILAAP)**
Position risk/Trading book interest rate risk	149	222
Credit and counterparty risks	900	991
FX rate risk	33	28
Operational risk	885	687
Non-trading book interest rate risk	0	636
Liquidity and financing risk	0	14
General business risk	940	940
Winding-down or restructuring risk	2 193	2 193
Total	**5 099**	**5 710**

For each risk the higher of the regulatory and internal capital requirement is to be made. In line with the above rule, the final capital requirement to be made based on 31 December 2018 data would be HUF 5.990 million, while the actual capital requirement to be made as of 31 December 2019 would be HUF 7.851 million, based on non-audited, preliminary data.

Central counterparty function

KELER CCP is not a credit institution; the Basel requirements, the CRR or the CRD do not apply directly to KELER CCP. However, the requirements of EMIR cover the

[5] Non-audited data

capital requirements of CCPs also. Central counterparties are required to have shareholders' equity of at least 7.5 million Euros on a permanent basis (Capital requirement II) and the amount of shareholders' equity is required to be proportionate to the risk arising from the central counterparty activity. The ESMA technical standard details the calculation method of capital requirement.

KELER CCP is required to determine the amount of capital requirement for the following risks (Capital requirement I):

1. capital requirement on credit and counterparty risks,
2. capital requirement on operational and legal risks;
3. capital requirement on market risks (FX rate and securities position risk),
4. capital requirement on winding up or restructuring of the activity of the central counterparty,
5. capital requirement on business risk

Determination of available capital
The amount of available capital equals the components of shareholders' equity:

- subscribed capital
- issued but not paid capital (-)
- capital reserves
- retained earnings
- tied-up reserves
- revaluation reserve
- profit or loss for the year

And the following items are to be deducted from this:

- Intangible assets
- contribution to the guarantee fund of other CCPs (ECC Euro guarantee fund contribution)
- contribution to own guarantee fund

The available capital is required to cover the following elements:

- Minimum capital requirement
- Dedicated own resources = (0,25 * MAX (Capital requirement I., Capital requirement II.)
- Other financial resources (remaining amount after deduction of the above two items)

The following table shows KELER CCP capital adequacy at the end of 2018 and 2019:

	2019	**2018**
Available capital	6 584	5 790
Minimum capital requirement	2 727	2 697
Dedicated own resources	620	613
Other financial resources	3 238	2 480

NOTE 5: CASH AND CASH EQUIVALENTS

	31.12.2019	**31.12.2018**
Due from banks and balances with CBH		
Within one year		
In HUF	13 073	10 160
In foreign currency	19 556	18 816
Cash equivalents	2 100	0
	34 729	**28 976**
Opening balance of expected credit loss (ECL)	6	0
Effect of transition to IFRS 9		6
Changes in the balance of expected credit loss (ECL)	1	0
Closing balance of expected credit loss (ECL)	**7**	**6**
Closing balance, net of ECL	**34 722**	**28 970**

The cash equivalents include treasury bills issued by the Hungarian State that has the maturity of less than three months when acquired. These are highly liquid financial assets subject to insignificant risk of value change. The cash equivalents are stated at amortised cost. The share equivalents are all treasury bills.

	31.12.2019	31.12.2018
Placements with other banks		
Within one year		
In HUF	9 108	3 153
In foreign currency	63 817	46 907
	72 925	**50 060**
Opening balance of expected credit loss (ECL)	15	0
Effect of transition to IFRS 9		11
Changes in the balance of expected credit loss (ECL)	-3	4
Closing balance of expected credit loss (ECL)	**12**	**15**
Closing balance, net of ECL	**72 913**	**50 045**

	31.12.2019	31.12.2018
Cash and cash equivalents in foreign currency, net of ECL		
AUD	27	27
CAD	26	23
CHF	42	28
CZK	20	19
DKK	13	12
EUR	59 584	42 537
GBP	1 186	1 147
HKD	1	1
JPY	8	7
NOK	6	8
PLN	88	27
RUB	4	3
SEK	8	8
THB	1	0
USD	2 794	3 045
	63 808	**46 892**

The bank accounts are demand deposits, available immediately for withdrawal. The interest on the bank account is between (-0,05%) to 0,90% for HUF deposits [(-0,05%)-(-0,3%) in 2018], (-1%) to 0,22% for foreign currency deposits [(-1,6%)-(0,00%) in 2018],. These expenses are recorded as interest paid in the profit or loss.

Following the CBH regulation the compulsory reserve balance was approximately 759,8 million HUF and 575,7 million HUF, respectively. This reserve was kept in short term CBH deposits.

The year-end balance of the CBH deposits were 2 915 million HUF and 207,7 million HUF at the end of 2019 and 2018, respectively.

The interbank balances are with Clearstream Bank, a SIX SIS, a Citibank A.G, a Citibank NY, a Citibank London, Eurobank Bulgaria AD, MNB, OTP Bank, MKB bank, and Gránitbank Zrt. (year-end balance: 0).

For cash and cash equivalents, impairment based on expected credit loss shall be recognized. All items in this group belongs to stage 1 for ECL purposes. For the calculation 45% LGD is used and the 12 month PD is measured between 0,003% and 0,017% which already considered the forward looking information at the date of the calculation.

The designated deposit balance includes HUF deposits that are received from the clients as contribution to the Guarantee funds (see Note 17). These cash balances may only be used for certain purposes, strictly regulated by EMIR (such as day-end repos). These cash balances are included in the above figures.

NOTE 6: STATE SECUTIRIES

	31.12.2019	31.12.2018
Financial assets		
Financial assets measured at amortized cost	16 446	14 232
Financial assets measured at fair value through other comprehensive income	23 392	35 380
	39 838	**49 612**

Financial assets measured at amortized cost (AC)	**31.12.2019**	**31.12.2018**
Hungarian government bonds		
Opening balance	**14 234**	**15 162**
Elimination of impairment under previous GAAP	0	7
Changes in the business model (reclassification)	0	171
Changes in the business model (reclassification)	0	-1 177
Changes in the business model (reclassification)	0	-534
Reclassification	0	45
Acquisition	4 949	779
Derecognition (maturity, sales)	-2 780	-218
Impairment loss (3rd stage ECL)	0	0
Interest accrued (Amortization)	45	-1
Gross value of debt instruments	**16 448**	**14 234**

Opening balance of expected credit loss (ECL)	2	0
Effect of transition to IFRS 9		2
Changes in the balance of expected credit loss (ECL)	0	0
Closing balance of expected credit loss (ECL)	**2**	**2**
Closing balance of securities, net of ECL	**16 446**	**14 232**

A190624A08	0	1 124
A191030C16	0	1 596
A200624B14	1 639	1 661
A200923C17	1 522	1 519
A201112A04	1 377	1 379
A210421C18	699	698
A211027B16	874	876
A220624A11	723	717
A221026B17	581	579
A231124A07	875	866
A240626B15	1 344	1 342
A250624B14	1 416	1 433
A271027A16	98	97
A281022A11	340	345
A251126C19	4 958	0
	16 446	**14 232**

Financial assets measured at fair value trough other comprehensive income	**31.12.2019**	**31.12.2018**
Opening balance	**35 357**	**35 408**
Debt instruments maturing under 3 months	0	2 545
Opening accumulated revaluation	27	0
Acquisition	49 252	51 132
Derecognition (maturity, sales)	-59 250	-53 777
Reclassification	-2 100	0
Impairment loss (3rd stage ECL)	0	0
Interest accrued (Amortization)	98	49
Remeasurement (Fair Value Adjustment)	10	27
	23 394	**35 384**
Opening balance of expected credit loss (ECL)	4	0
Effect of transition to IFRS 9		4
Changes in the balance of expected credit loss (ECL)	-2	0
Closing balance of expected credit loss (ECL)	**2**	**4**
Closing balance, net of ECL	**23 392**	**35 380**

D190227	0	9 187
D190424	0	6 397
D190522	0	7 302
D190731	0	4 761
D190925	0	650
D191120	0	7 083
D200226	6 477	0
D200401	500	0
D200429	5 316	0
D200624	200	0
D201021	10 899	0
	23 392	**35 380**

The discount treasury bills are purchased with the yields between 0% and 0.55%.

The interest of the FVTOCI instruments (DKJ) was taken to the Consolidated Statement of Comprehensive Income using the effective interest method, and the changes in the fair value was recognized as other comprehensive income (OCI). This OCI will be reclassified to the profit or loss when the underlying financial asset is derecognized.

The reason of the decrease in the balance of the treasury bills: these items have expired and at the end of the reporting period the proceed from those are recognized as balances with other banks.

Interest on AC category instruments is calculated using the effective interest method in the statement of comprehensive income. These assets do not required to be measured at fair value at the end of the year.

Market value of AC assets at end of period:

	31.12.2019	**31.12.2018**
Fair value of financial assets measured at cost (AC)	17 257	14 937

There are no adjustments from remeasurement in case of AC securities in the consolidated financial statements (except for accumulated impairment loss based on ECL)
The fair value of these assets can be determined based on readily available quoted prices published by Hungarian Debt Agency (Level 1). However, when the fair value of these assets cannot be determined based on such quoted prices, instrument are measured based on yields quoted for similar financial instruments and adjusted using generally applied valuation techniques (Level 2). See more information in Note 38.

The ECL of these instruments are based on the credit quality of these instruments, derived from the classification of the issuer (Hungarian State) also considering the requirements of the so called 'standard risk management methodology'. In respect of ECL, both treasury bills and government bonds are all classified in the Stage 1 category.

NOTE 7: TRADE RECEIVABLES AND TRADE PAYABLE RELATING TO GAS MARKET

Accounting policies relating to the trading on the gas market is presented in Note 3. This balance relates to receivables from the participants on the foresaid gas market. These are paid – according to the contract – in less 5 than days (in 2018 this deadline was 15 days). These balances are neither impaired nor past due. The collateral behind the receivable guarantees that the chance of any type of un-collectability is far beyond remote.

The receivable from the gas market services are also subject to ECL. Here – due to the nature of the receivable – the Group uses the simplified method, so immediately the life-time ECL is recorded without further tracking of the individual credit quality. Due to the collateral behind these transactions the loss ratio is low (see accounting policy for details).

The gas market guarantee system guarantees the settlement of claims.

The balance of this receivable depend on the trading activity on the market that the entity does not influence.

The liabilities from the gas market are they payable amount that is the other "party" of the clearing transaction. The payables are – by contractual agreement – due on the same day as the corresponding receivable.

The fair value of these receivables and payables are close to their carrying amount (the payment is done in a short time and no other issues require adjustment).

NOTE 8: TRADE RECEIVABLES FROM CENTRAL COUNTERPARTY AND DEPOSITORY OPERATION

Receivables relating to clearing and depository activities	**31.12.2019**	**31.12.2018**
Receivable balance	676	657
Accumulated impairment losses (collective)	-36	-35
Accumulated impairment losses (specific)	0	0
Receivable balance net of impairment (book value)	**640**	**622**

Accumulated impairment losses of trade receivables		
Opening accumulated impairment losses	-35	-40
Impairment losses recognized in the current period, collective	-11	-8
Impairment losses recognized in the current period, specific	0	0
Impairment losses derecognized in the current period	10	13
Closing accumulated impairment losses	**-36**	**-35**

These trade receivables include the not yet paid part of the rendered CCP, Depository and similar services. The balances are stated at invoiced amounts since they become payable in a short time.

The expected credit loss on the receivables is assessed by the Group based on simplified manner thus immediately the life-time ECL is recorded without further tracking of the individual credit quality. The impairment loss based on ECL – if it not assessed individually – shall be determined based on aging table (see details in Notes 3.)

The derecognized impairment loss is due to the recovery of receivables that were previously identified as impaired and impairment loss was recognized.

The impairment loss or gain of the reversal is reported on a separate line in Consolidated Statement of Comprehensive Income, on a net basis.

The fair value of these receivables do not show significant difference from the amortized cost as carrying amounts, thus carrying amount shows the best estimation of the fair value.

NOTE 9: OTHER RECEIVABLES, TAX RECEIVABLE

	31.12.2019	31.12.2018
Other receivables		
Receivables from settlement day differences	0	844
Accrued expenses	379	446
Interest	175	55
Tax receivables (other than income taxes)	558	8
Advances to suppliers	16	16
Loans to employees	31	30
Sundry other receivables	21	291
	1 180	**1 690**
Expected credit loss of other receivables	0	0
Closing balance, net of ECL	**1 180**	**1 690**
Opening balance of expected credit loss (ECL)	0	0
Effect of transition to IFRS 9	0	0
Changes in the balance of expected credit loss (ECL)	0	0
Closing balance of expected credit loss (ECL)	0	0
Closing balance, net of ECL	**1 180**	**1 690**

Prepaid expenses and tax receivables are not subject to IFRS 9, thus calculation of ECL is not required, however for financial assets under other receivables ECL was calculated.

The accruals include hardware maintenance fees paid in advance and unexpired softwer update fees as material amounts

The other receivable also include a balance that was the result of an administrative malfunction and a duplicated bank transfer, both was resolved in the first month of 2019 (the issue was resolved by the end of this period, the issue only influences the comparative period).

The items include the following material claims: KELER CCP and the Foreign Clearing House (ECC) operated on different days around the end of the year and due to different banking days, the total settlement of some items did not break (the ECC deposit was reduced, however. the decrease in customer accounts was only on the first banking day of 2019). The resulting difference was recognized as a receivable, which was settled on the first banking day of 2019. The amount resulting from this discrepancy is determined by the Group based on the net position of the ECL. There were no differences from settlement day deviations.

Other accruals include cost items that have been prepaid for several years of support, but their performance period is comprised of the following reporting periods (HUF 392 million) and some prepaid operating cost items.

The other tax receivables consist of the following balances:

	31.12.2019	**31.12.2018**
Value added tax	551	0
Social security contributions	1	1
Other taxes	6	7
	558	**8**

All tax balances are related to the Hungarian Tax Authority.

The income tax receivable is disclosed separately in the consolidated financial statement (at the end of 2019 year: 19 MHUF; at the end of 2018 year: 150 MHUF).
The income tax liabilities are recognized as liabilities by the Group and it will not be offset between the legal persons in the Group. The KELER Group considers for KELER CCP the corporate income tax regulated Act LXXXI of 1996 on Corporate Income Tax and Dividend Tax as income tax and for KELER the aforementioned tax and the local tax and innovation contribution (regulated by Act C of 1990 on Local Tax and Act LXXVI of 2014 on Scientific Research, Development and Innovation, respectively) as income tax.

These receivables do not yield interest and they are all to be received within one year. They are not impaired nor past due. The fair value of these receivables is the same with the carrying amount.

NOTE 10: RECEIVABLES FROM CLEARING HOUSES

KELER CCP as a general clearing member of the ECC is entitled to provide power market non-clearing membership services from 1 July 2010 on the spot power market, and 1 July 2011 on the futures power market. According to the GCM status clearing members have to comply with specified margin and collective guarantee requirements of ECC. During 2013 ECC introduced the daily spot margining system and a new margin calculation method which resulted a relatively high amount of margin call towards KELER CCP.

The receivable is denominated in euro. In the original currency the receivable from power market is: 54 998 250 EUR on 31 December 2019 (61 447 500 EUR on 31 December 2018).

The clearing receivable is subject to ECL. The receivable was classified in Stage 1 category. The full receivable is with one counterparty therefore it embodies risk concentration.

The fair value of these receivables do not show significant difference from the amortized cost as carrying amounts, thus carrying amount shows the best estimation of the fair value.

NOTE 11: INTANGIBLE ASSETS

Intangible assets	Concessions and similar rights	Intellectual property	Developments	Total
Cost				
Balance as on 1 January 2019	171	8 866	177	9 214
Additions	0	576	518	1 094
Ready to use	0	0	-266	-266
Derecognition, scrap	0	0	0	0
Settlement of advances	0	-15	0	-15
Proceeds from advances	0	12	0	12
Disposals	0	0	0	0
Balance as on 31 December 2019	171	9 439	429	10 039
Accumulated Depreciation, Amortization and Impairment				
Balance as on 1 January 2019	151	8 067	0	8 218
Current year amortization	0	502	0	502
Impairment of intangible assets	2	24	0	26
Derecognition from scrap	0	0	0	0
Disposals	0	0	0	0
Balance as on 31 December 2019	153	8 593	0	8 746
Net book value				
Balance as on 1 January 2019	**20**	**799**	**177**	**996**
Balance as on 31 December 2019	**20**	**844**	**429**	**1 293**

Intangible assets	**Concessions and similar rights**	**Intellectual property**	**Developments**	**Total**
Cost				
Balance as on 1 January 2018	171	7 995	3 637	11 803
Additions	0	807	0	807
Derecognition, scrap	0	48	-3 460	-3 412
Settlement of advances	0	-2	0	-2
Proceeds from advances	0	18	0	18
Disposals	0	0	0	0
Balance as on 31 December 2018	171	8 866	177	9 214
Accumulated Depreciation, Amortization and Impairment				
Balance as on 1 January 2018	151	7 526	3 342	11 019
Current year amortization	0	452	0	452
Impairment of intangible assets	0	89	70	159
Derecognition from scrap	0	0	-3 412	-3 412
Disposals	0	0	0	0
Balance as on 31 December 2018	151	8 067	0	8 218
Net book value				
Balance as on 1 January 2018	**20**	**470**	**294**	**784**
Balance as on 31 December 2018	**20**	**799**	**177**	**996**

The increase in the balance includes new purchases and the development of the new core system of the Group, together with several development of currently used system.

The systems that currently used and further developed are:

- the data warehouse system
- several smaller adjustments to other systems.

Impairment test – intangible assets

The Group accounted for impairment for the following three assets during 2019:

- a reporting system which could not be used due to the change in the IT environment and the change in the business logics, therefore the reporting system cannot be used further;
- one of the customer on the acquired customer does not have business relation with the Group anymore, therefore the customer list was partially impaired;
- LEI system – business reasons led to a smaller impairment on this asset.

Reporting system
The system was fully impaired and disposed. Due to the changes in the business model and the IT environment this system cannot be used in the future, so it must have been derecognized. The derecognition resulted in a loss of 22 085 tHUF. (The software was not impaired at the end of 2018.)

Customer list
A customer list was acquired previously, which had an indefinite useful life (book value: 18 661 tHUF). This list became impaired in 2019, since one of the clients stopped having business relations with the subsidiary (the list was not impaired at the end of 2018). The value of the partial impairment was calculated to be 1 623 tHUF.

LEI system
This software was partially impaired, since value in use calculations indicated a minor decrease in the recoverable amount.

Comparative period

In 2018 the Group arrived to the conclusion that a system under development – due to the changes in the business environment – could not be utilized in the planned ways. Since the modification of the system was beyond economical, the previous development was written off as not useable in 2018 (effect on net profit: 70 MHUF). This impairment has no effect on the 2019 figures.

Another project of the Group (BRM) was finalized in 2018 but due to the fact that this project was dedicated to a contract and this contract was not concluded, the system must have been fully impaired (89 million HUF). There is no effect from this project for 2019.

Commitments

KELER launched the development of its new core system (KSZP project). The development has a material budget from the point of view of the Group. The commitment from this project – not yet recognized in the financial statements – amount to approximately 3 561 million HUF (including those items that later will not be recognized as assets), out of which 1 301 million HUF is backed up by contracts. The project is expected to be finalized by 2021.

The Group launched a project during this period under which it plans to service the Kazakh market and operate as a central counterparty. The project is in an early stage so there were no direct costs involved, yet. The received payments from the counterparty were recognized as liability.

NOTE 12: PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment	**Buildings and improvements**	**Right Of Use asset**	**Machinery and equipments**	**Work in progress**	**Total**
Cost					
Balance as on 1 January 2019	138		1 853	540	2 531
Initial application of IFRS 16	0	424	0	0	424
Asset retirement obligation	0	25	0	0	25
Derecognition due to sublease	0	0	0	0	0
Purchases	7	0	175	19	201
Capitalisation	0	0	559	-559	0
Proceeds from advances	0	0	-15	0	-15
Sale	-18	0	-461	0	-479
Balance as on 31 December 2019	127	449	2 111	0	2 687
Accumulated Depreciation and Amortization					
Balance as on 1 January 2019	95		1 640	0	1 735
Current year's depreciation	6	89	183	0	278
Sale	-18	0	-448	0	-466
Balance as on 31 December 2019	83	89	1 375	0	1 547
Net book value					
Balance as on 1 January 2019	**43**		**212**	**0**	**796**
Balance as on 31 December 2019	**44**	**359**	**737**	**0**	**1 140**

Property, plant and equipment	**Buildings and improvements**	**Right Of Use asset**	**Machinery and equipments**	**Work in progress**	**Total**
<u>**Cost**</u>					
Balance as on 1 January 2018	135		1 811	0	1 946
Purchases	3		63	540	606
Proceeds from advances	0		15	0	15
Sale	0		-36	0	-36
Balance as on 31 December 2018	138		1 853	540	2 531
<u>**Accumulated Depreciation and Amortization**</u>					
Balance as on 1 January 2018	89		1 571	0	1 660
Current year's depreciation	6		97	0	103
Sale	0		-28	0	-28
Balance as on 31 December 2018	95		1 640	0	1 735
<u>**Net book value**</u>					
Balance as on 1 January 2018	**46**		**240**	**0**	**286**
Balance as on 31 December 2018	**43**		**212**	**540**	**796**

The above items contribute to the business activity. The buildings and improvements include improvements on leasehold property (the headquarter office of Group). These improvement include incentives received from the lessor (original value: 33 MHUF). The lessor – in order to encourage the entry in the lease agreement – purchased certain items for the Group. These items may only be used by the Group (they are built in the leased property). As the Group concluded that these assets are controlled by them they recognized them as non-current asset. The income relating to this is deferred. The deferred income is released in line with the deprecation charged for these received assets.

The majority of the machinery and equipment are computers, servers and similar IT equipment that is customized for the activity of the Group. A smaller portion of this position is fixtures and fittings for the administrative activity.

The ROU asset is recognized due to a lease agreement on the office building. The building is leased from an external party. The lease period ends in 2024, middle of the year. A lease liability was also recognized (see Note 19.). The ROU was initially measured on the value of the discounted cash flows derived from this contract. For discounting the incremental interest rate of 3,82% was used.

The other leased property is for the building where the backup system of the Group is located. This lease expires at the end of 2020. The incremental interest rate used for the calculation was 3,82%. That was used to calculate the value of the ROU.

Currently there are no commitment to purchase tangible assets. There are no pledges or similar items limiting the transfer or use of these assets.

NOTE 13: TRADE PAYABLES

Payables from other activities that are not classified to other positions are under trade payables. These amounts are usually due within 30 days. The trade payables are mainly denominated in HUF and in EUR.

Material amounts in trade payables are outstanding amounts for the IT service providers (the largest amounts are: 32, 42, 54, 59 and 124 million HUF).

The book value and the fair value of the trade payables are not materially different.

NOTE 14: OTHER PAYABLES

	31.12.2019	31.12.2018
Other payables		
Accrued expenses	374	358
Sundry other expenses	183	87
Financial guarantee contract	6	5
	563	**450**

The accrued expenses consist of sundry expenses that relate to this period but they were not yet invoiced, incurred. The liabilities due to discounts include items that were granted to clients based on their activity in the previous periods. These discounts are calculated at the end of the period and deducted from the revenues.

The other liabilities include past obligations from not used paid leaves and accruals from lease incentives.

The amounts received from partners include upfront payments received in relation to the AIX project (the Kazakh CCP activity). This liability will be taken to revenues, once the performance obligations are met.

The balance of this liability includes a financial guarantee contract liability due to the central counterparty activity of the Group. The nature of the activity of the Group requires to cover all the risk that are coming from default events (i.e. that the central counterparty must settle the compensation of the transaction even if one of the parties of the clearing agreement is unable to pay/act). To ensure the source of these payments the entity operates guarantee system with several funds collected from the participants of the markets. These funds are based on calculations which are not designed to provide full coverage (i.e. it is impossible to provide 100% guarantee). Starting from 2015 the entity decided to set up a separate liability to reflect this. To deal with the statistically uncovered exposure the entity recognizes a financial guarantee contract liability based on the available collateral and the probability of a loss event regardless how small this probability is. The changes in the FGC balance is fully explained by the movements of the guarantee funds.

NOTE 15: INCOME TAX PAYABLE AND OTHER TAXES PAYABLE

	31.12.2019	31.12.2018
Taxes payable (other than income taxes)		
Personal income tax	37	33
Rehabilitation contribution	3	3
Healthcare contribution	0	12
Labor market contribution	0	0
Health insurance and pension contributions	37	26
Social security contributions	52	37
Value added tax	75	182
Other taxes	6	3
	210	**296**

The Group considers corporate income tax, local business tax and innovation contribution (latter two only from the point of view from the Parent) as income taxes. These items are separately disclosed in the balance sheet (separated from other tax liabilities). (See Note 9.) Current tax liability is at the end of 2019 year: 49 MHUF; at the end of 2018 year: 0 MHUF

The tax liability balances are all payable to the Hungarian Tax Authority except the bank oversight fee that is payable to the Central Bank of Hungary and the local tax, which is payable to the local government of Budapest (latter two has a receivable balance at the end of 2019).

NOTE 16: DEPOSITS FROM CUSTOMERS, FINANCIAL GUARANTEE CONTRACT

	31.12.2019	31.12.2018
Deposits from customers		
Interest-bearing		
Within one year		
In HUF	36 161	32 728
In foreign currency	58 904	42 254
Non-interest-bearing		
Within one year		
In HUF	96	141
In foreign currency	40 106	39 930
	135 267	**115 053**

AUD	19	19
CAD	16	13
CHF	40	25
CZK	9	9
EUR	93 743	76 839
GBP	2 320	2 193
HKD	1	1
JPY	1	1
NOK	4	7
PLN	87	27
RUB	4	3
THB	1	0
USD	2 759	3 024
	99 004	**82 161**

These balances include the deposits of the customers. These balance are available for the customers for immediate withdrawal.

The deposits are stated at amortized cost (the fair value of these liabilities are close to their book value).

The Group paid an annual average rate between to (-0,11%) to –(0,21%) in year 2019 for the HUF interest-bearing deposits, and did not pay interests for the foreign exchange deposits, or the deposited amount received negative interest (2019: between 0 to 0,85%, 2018: -1,6%). The negative payable interest was accounted for as interest income by the Group.

NOTE 17: GUARANTEE FUND LIABILITIES

	31.12.2019	31.12.2018
Liabilities for Guarantee Funds		
Exchange Settlement Fund	2 700	4 016
Collective Guarantee Fund	2 526	2 381
Gas Market Collective Guarantee Fund	1 187	970
CEEGEX Market Collective Guarantee Fund	558	929
Less own contribution	-21	-20
	6 950	**8 276**

As an element of the guarantee system, KELER CCP operates several collective guarantee funds. The purpose of the guarantee fund is to reduce the risk arising from default or failure of cleared and guaranteed transactions made by the Clearing Members. Contributions of the Members are kept in cash on 31 December.

The amount of the above contributions depends on the member's activity on the given market. Therefore these amounts are changing frequently.

The collected amounts are subject to interest. Interest is paid on a regular basis. These liabilities are recognized at amortized cost which is equal to their fair value.

Since the Group itself transacts on the above markets, it must have contributed to these funds. The own contribution for this fund was removed from the liability and on the other hand no receivable were recognized (the positions were netted).

The changes in the FGC is recognized in the Consolidated Statement of Comprehensive Income. The fair value of the FGC was arrived to by using the collateral's fair value, adjusted with haircut, taking into consideration the not yet covered risks.

The fair value of the liabilities are close to their carrying amount.

NOTE 18: DEFERRED TAXES, RECONCILIATION OF THEORETICAL AND ACTUAL TAX

When calculating deferred taxes related to income tax type in accordance with IAS 12 and relevant accounting policy, the Group compares the amounts to be considered for taxation purposes with the carrying value for each asset and liability. If the difference is reversible (i.e. the difference is equalized in the foreseeable future), then a deferred tax liability or asset is recorded in a positive or negative amount as appropriate. Recoverability was separately examined by the Group when recording each asset.

Deferred tax may only be recognized for corporate income tax. When measuring the deferred tax, the Group applied a flat rate of 9%. The tax strategy of the entities confirms that the recognized tax assets will be recovered. The changes in the deferred tax balances are recognized in net profit expect changes related to FVTOCI instruments where the changes are taken to other comprehensive income.

Deferred tax assets are supported by a tax strategy which confirms that the asset is expected to be recovered based on the information available.

The change in deferred taxes was recognized in the profit or loss, in the case of FCTOVI financial instruments in the other comprehensive income.

The tax balances and temporary differences for 2019 are as follows:

Balance	**Tax base**	**Carrying Amount**	**Deductible, taxable difference**	**Deferred tax through profit or loss**	**Deferred tax through OCI**
Cash and cash equivalents	34 722	34 722	0	0	0
Placement with other banks	72 913	72 913		0	0
Receivables from clearing and depository activities	646	640	-6	-1	0
Other receivables	1 180	1 180	0	0	0
Assets measured at amortized cost	16 446	16 446	0	0	0
Debt instruments measured at fair value through other comprehensive income	23 382	23 392	10	0	1
Income Tax - Current tax receivables	19	19	0	0	0
Income Tax - Deferred tax assets	128	128	0	0	0
Receivables from foreign clearing houses	18 179	18 176	-3	0	0
Receivables from clearing on gas market	2 485	2 485	0	0	0
Property, plant and equipment	1 114	1 140	26	2	0
Intangible assets	1 361	1 293	-69	-6	0
Trade payables	673	673	0	0	0
Other payables	478	563	-85	-7	0
Provisions	0	248	-248	-21	0
Deposits from customers	135 267	135 267	0	0	0
Liabilities for Guarantee Funds	6 950	6 950	0	0	0
Trade payable from gas market activity	2 465	2 465	0	0	0
Income tax – Current tax liability	49	49	0	0	0
Lease liability	360	360	0	0	0
Other tax payables	210	210	0	0	0
Accrued loss	0	1 077	-1 077	-96	0
Deferred tax assets				**129**	
Deferred tax liability				**0**	**1**
Accrued loss after settlement	**Total deferred tax assets**			**128**	

The tax balances and temporary differences for 2018 are as follows:

Balance	Tax base	Carrying Amount	Deductible, taxable difference	Deferred tax through profit or loss	Deferred tax through OCI
Cash and cash equivalents	28 970	28 970	0	0	0
Receivables relating to clearing and depository activities	622	622	0	0	0
Other receivables	1 690	1 690	0	0	0
Assets measured at amortized cost	14 232	14 232	0	0	0
Debt instruments measured at fair value through other comprehensive income	35 353	35 380	27	0	-2
Property, plant and equipment	701	796	95	-9	0
Intangible assets	1 157	996	-161	14	0
Trade payables	333	333	0	0	0
Other payables and accrued expenses	714	639	-75	7	0
Statutory reserves	267	267	0	0	0
Provisions	0	0	0	0	0
Accrued loss	0	0	0	0	0
Deferred tax assets				**21**	**0**
Deferred tax liability				**-9**	**-2**
Accrued loss after settlement	**Total deferred tax assets**			**0**	

Deferred tax balances are not discounted.

The Parent has a material balance from losses carried forward, which may be used to offset future taxable profit or taxable temporary differences therefore leading to deferred tax asset. The Parent – based on the one-year business plan and the strategic plan for the longer timeframe – concluded that recoverable tax base is 1 077 million HUF. The tax effect of this was recognized as deferred tax asset (therefore it is also recognized in the consolidated financial statements). Most important component of this tax base are: provisions and certain employee benefits leading to deferred tax asset. The items mentioned do decrease the net profit (trough taxation). The Group recognized the tax effect of the remeasurement of FVTOCI financial instrument in other comprehensive income.

NOTE 19: LEASE LIABILITY

The Group calculated the lease liability – on the transition to IFRS 16 – as the present value of the future cash payments. The cash flows are denominated in Euro, therefore the calculation was also done in euro. The lease payments are linked to and index (inflation). This variable lease payment was taken into consideration when calculating the liability, however the expectation were not factored in the payments, the changes will be treated as a reassessment in the later periods.

When calculating the lease liabilities, the rate used was 3,82% (incremental borrowing rate) which was backed up by an external evidence from the bank.

When accounting for the lease the Group uses the Euro amounts which is retranslated and any difference is accounted for as a foreign exchange rate gain or loss.

Lease liability	**31.12.2019**	**31.12.2018**
Opening balance	0	
Initial application of IFRS 16	422	
Interest on the lease	16	
Lease payment	89	
Foreign exchange rate loss	11	
Closing balance	**360**	
Lease interest for the future periods	37	
Lease payments for the future periods	**397**	
Of which: short term liabilities	87	
Of which: long term liabilities	273	

NOTE 20: PROVISIONS

The Group reported provision for two issues. On one hand there is a ROU which requires dismantling at the end of its useful life, on the other hand it may be required to make a indemnification payment due to a client transaction. The first provision is recorded at present value, the second one is at nominal value.

	31.12.2019	**31.12.2018**
Provisions		
Opening balance	0	786
Addition of provision	247	0
Unwinding of the discount	1	0
Provisions reversed	0	-786
	248	**0**

Of which:		
Long term	*26*	*0*
Short term	*222*	*0*

Provisions balances are derived from the following issues:

	31.12.2019	**31.12.2018**
Provisions recognized		
Indemnification payment	220	0
Asset retirement obligation (ARO)	28	0
	248	**0**

The indemnification payment provision in 2019 was made because of one of the clients of KELER went through with an unlawful transaction (funds made unavailable for the tax authorities). Due to the nature of this transaction no further disclosers are made, these disclosures are postponed until the case is resolved.

One of the contract of the Group was declared to be onerous in 2017, so a provision was recognized. Only those liabilities were included in the provision which are coming from legal or constructive obligation at the end of the period. The contract was closed in 2018 and it was agreed that the other party does not require any payments from KELER. Therefore this provision had to be reversed (This case had effect only to the previous period).

NOTE 21: SHARE CAPITAL

There was no change in the share capital of the Company compared to the prior year. The share capital consists of 900 shares with nominal (par) value of HUF 5 million per share as on 31 December 2019. (as well as on 31 December 2018) All 900 shares have been authorized, issued and fully paid.

	31.12.2019	**31.12.2018**
Share capital		
Magyar Nemzeti Bank (Central Bank of Hungary)	2 400	2 400
Budapesti Értéktőzsde (Budapest Stock Exchange)	2 100	2 100
	4 500	**4 500**

There are no special rights or limitations attributed to shareholders by these shares.

Magyar Nemzeti Bank (Central Bank of Hungary) held 53.33% of the shares directly and 37,96% indirectly as of 31 December 2019 (same at the end of last reporting period).

Budapesti Értéktőzsde (Budapest Stock Exchange) held 46.67% of the shares directly as on 31 December 2019 and 31 December 2018. The CBH's stake in Budapest Stock Exchange went up to 81,65% in 2016, but it went down to 81,35% in 2019.

Non-controlling interest represents the 0.017% share of non-controlling shareholders of BSE in KELER CCP.

NOTE 22: STATUTORY RESERVES

	31.12.2019	31.12.2018
Statutory Reserves		
General reserve	249	145
General risk reserve	122	122
	371	**267**

These reserves are recognized due to legislative requirements. Certain regulation requires the Parent Company to transfer from earnings certain amounts to these reserves, so they will not be available for distribution, but only for the cover of operating losses.

General reserve

The general reserve is 10% of the annual profit after tax (calculation is based on data in separate financial statements of the Parent Company). The reserve created here can only be used to cover losses (if the profit reserve is negative).

General risk reserve

The general risk reserve (which was previously calculated from pre-tax profit) can no longer be recognized due to changes in the legislation. The remaining balance can be transferred to profit reserve in case of use.

NOTE 23: FAIR VALUE TROUGH OTHER COMPREHENSIVE INCOME RESERVE

This reserve accumulates the revaluation of FVTOCI debt instruments. This reserve is reclassified to net profit when the asset is derecognized. Since FVTOCI debt instruments only include treasury bills all the balance of 1st January 2019 was reclassified to net profit during the period.

The deferred tax asset of performed transfer is also reflected in the reserves.

NOTE 24: STATEMENT OF FINANCIAL POSITION CATEGORIES BASED ON CURRENT-NON CURRENT DISTINCTION

The Group presents it's Consolidated Statement of Financial Position in liquidity order. The reason for that is that the KELER is a financial institution and as such it is usual to follow this order.
The Consolidated Statement of Financial Position based on the current – non-current distinction is the following:

	31.12.2019	31.12.2018
Non-current assets	19 007	1 792
Current assets	153 526	155 782
Short term liabilities	146 390	129 240
	26 143	**28 334**
Financed by:		
Long term liabilities	396	75
Net assets	25 747	28 259
	26 143	**28 334**

The non-current assets include the intangible assets, the property, plant, and equipment (including ROU), securities measured at amortized cost and deferred tax asset.
The long-term liabilities include certain employee benefits, lease liability and the financial guarantee contract liability.
All other items of the Consolidated Statement of Financial Position are current. The Group defines an item of the Consolidated Statement of Financial Position being current if the due date is within 12 months.

Maturity analysis of assets and liabilities

The Group prepares a maturity analysis to present when the assets and liabilities of the entity are/becoming due. This analysis presents the surplus or deficit in items available for settlement. The main considerations on liquidity risk is presented in Note 4.

As on 31 December 2019	Within 3 months	Within one year and over 3 months	Within 5 years and over one year	Over 5 years	Without maturity	Total
Cash and cash equivalents	34 722	0	0	0	0	**34 722**
Placements with other banks	72 913	0	0	0	0	**72 913**
Assets measured at amortized cost	0	4 538	5 097	6 811	0	**16 446**
Debt instruments measured at fair value through other comprehensive income	5 977	17 415	0	0	0	**23 392**
Income Tax - Current tax receivables	0	19	0	0	0	**19**
Income Tax - Deferred tax assets	128	0	0	0	0	**128**
Receivables from clearing on gas market	2 485	0	0	0	0	**2 485**
Receivables from clearing and depository activities	640	0	0	0	0	**640**
Receivables from foreign clearing houses	18 176	0	0	0	0	**18 176**
Other receivables	1 151	5	17	7	0	**1 180**
Intangible assets	0	0	0	0	1 293	**1 293**
Property, plant and equipment	0	0	0	0	1 140	**1 140**
TOTAL ASSETS	**136 192**	**21 977**	**5 114**	**6 818**	**2 433**	**172 534**
Deposits from customers	135 267	0	0	0	0	**135 267**
Liabilities for Guarantee Funds	6 950	0	0	0	0	**6 950**
Income tax – Current tax liability	49	0	0	0	0	**49**
Other tax liabilities	210	0	0	0	0	**210**
Trade payable from gas market activity	2 465	0	0	0	0	**2 465**
Trade payables	673	0	0	0	0	**673**
Lease liabilities	360	0	0	0	0	**360**
Provisions	248	0	0	0	0	**248**
Other payables	485	0	65	13	0	**563**
TOTAL LIABILITIES	**146 707**	**0**	**65**	**13**	**0**	**146 785**
LIQUIDITY (DEFICIENCY)/EXCESS	**-10 515**	**21 977**	**5 049**	**6 805**	**2 433**	**25 749**

As on 31 December 2018	Within 3 months	Within one year and over 3 months	Within 5 years and over one year	Over 5 years	Without maturity	Total
Cash and cash equivalents	28 970	0	0	0	0	**28 970**
Placements with other banks	50 045	0	0	0	0	**50 045**
Assets measured at amortized cost	0	2 720	8 295	3 217	0	**14 232**
Debt instruments measured at fair value through other comprehensive income	7 690	27 690	0	0	0	**35 380**
Income Tax - Current tax receivables	0	150	0	0	0	**150**
Trade receivables relating to gas market	4 941	0	0	0	0	**4 941**
Receivables from clearing and depository activities	622	0	0	0	0	**622**
Receivables from foreign clearing houses	19 753	0	0	0	0	**19 753**
Other receivables	1 661	4	17	8	0	**1 690**
Intangible assets	0	0	0	0	996	**996**
Property, plant and equipment	0	0	0	0	796	**796**
TOTAL ASSETS	**113 682**	**30 564**	**8 312**	**3 225**	**1 792**	**157 575**
Deposits from customers	115 053	0	0	0	0	**115 053**
Liabilities for Guarantee Funds	8 276	0	0	0	0	**8 276**
Trade payable from gas market activity	4 908	0	0	0	0	**4 908**
Trade payables	333	0	0	0	0	**333**
Other payables	671	0	75	0	0	**746**
TOTAL LIABILITIES	**129 241**	**0**	**75**	**0**	**0**	**129 316**
LIQUIDITY (DEFICIENCY)/EXCESS	**-15 559**	**30 564**	**8 237**	**3 225**	**1 792**	**28 259**

When the maturity of an item is not determinable the group classifies the asset as being without a maturity, the liability to the within 3 months category. The cash deficit in the first three months are resolved by liquidating a part of the treasury bill portfolio. The treasury bills are sold on OTC markets.

The more detailed liquidity categories of the securities:

As on 31 December 2019	**Within 1 year**	**1-2 years**	**2-3 years**	**3-4 years**	**4-5 years maturity**	**5-6 years maturity**	**6-7 years maturity**	**7-8 years maturity**	**8-9 years maturity**	**9-10 years maturity**	**Sum**
Assets measured at amortized cost	4 538	1 573	1 305	875	1 344	6 373	0	98	340	0	**16 446**

As on 31 December 2018	**Within 1 year**	**1-2 years**	**2-3 years**	**3-4 years**	**4-5 years maturity**	**5-6 years maturity**	**6-7 years maturity**	**7-8 years maturity**	**8-9 years maturity**	**9-10 years maturity**	**Sum**
Assets measured at amortized cost	2 720	4 560	1 573	1 296	866	1 342	1 433	0	97	345	**14 232**

NOTE 25: INCOME FROM CLEARING AND DEPOSITORY ACTIVITY

Income from clearing and depository activity	01.01.2019-31.12.2019	01.01.2018-31.12.2018
Income from security lending activity	0	0
Income from settlement activity	3 972	3 513
Income from issuer activity	629	634
Income from clearing activity	1 709	1 368
Income from collateral handling	1	1
Income from communication	46	42
Income from depository services	285	246
Income from banking activity	95	85
Income from reporting activity	162	140
Income from WARP	144	137
	7 043	**6 166**

One of the main revenue generating activity of the Group is the fee income from acting as a central counterparty on several markets and as central depository. These revenues are allocated to the period when the service is provided.

NOTE 26: NET INTEREST INCOME

Net income from interest	01.01.2019-31.12.2019	01.01.2018-31.12.2018
Interest income		
Income from interest on amortized cost instruments	491	538
Income from interest on fair value through other comprehensive income items	112	50
Interest income from client accounts	709	446
Interest from repos	23	16
Interest on statutory reserves placed at CBH	6	5
	1 341	**1 055**
Interest expense		
Interest expense on bank accounts	471	363
Interest on repos	16	10
	487	**373**
	854	**682**

The other revenue generating activity of the Group is – as a financial institution – to hold free financial assets to gain from net interest. The deposits of the clients are placed on the market to reach maximum yield. Gain from this activity is calculated on net basis.

NOTE 27: GAINS AND LOSSES FROM TRADING WITH SECURITIES

This line in the Consolidated Statement of Comprehensive Income includes the realized gains and losses from trading of treasury bills and government bonds. The revaluation gains and losses of treasury bills are taken to the other comprehensive income and reclassified to profit or loss upon realization. No other instruments resulted in gains or losses from trading.

NOTE 28: BANK FEES, COMMISSION AND SIMILAR ITEMS

	01.01.2019-31.12.2019	01.01.2018-31.12.2018
Operating expenses		
Banking expenses		
Depository services	17	22
Banking services	139	130
LEI issuance services	69	58
TR service - mediated	22	18
Other mediated services	4	4
	251	**232**

This position fees, commissions charged by other financial institutions and the stock exchange for the activities of the Group.

NOTE 29: PERSONNEL EXPENSES

	01.01.2019-31.12.2019	01.01.2018-31.12.2018
Personnel expenses		
Wages	2 273	1 973
Base wages	2 018	1 726
Bonuses	255	247
Social security and other contributions	501	491
Other cost of personnel	242	322
	3 016	**2 786**

All the personal expenses are relating to short-term employee benefits – including accumulating paid leaves – except the jubilee bonuses which is a long term employee benefit (in 2019 – 10 million HUF, recorded as gain, in 2018 37 million HUF) and also includes termination benefits (2019: 39 million HUF, 2018: 53 million HUF)

The average number of employees was 196 in the period ended 31 December 2019 188 in the period ended 31 December 2018.

NOTE 30: EXPERT, TELECOMMUNICATION, IT-SUPPORT FEES AND OTHER OPERATING EXPENSES

The Group classifies it's operation expenses according to the type of the cost incurred. Material items (like expert fees, telco fees and IT-support) are disclosed separately on the face of the Consolidated Statement of Comprehensive Income.

The other expenses are those operational items that do not fall into the previous categories. The breakdown of that line is the following:

	01.01.2019-31.12.2019	01.01.2018-31.12.2018
Operating expenses		
Depreciation and amortization	**777**	**551**
Expenses from maintenance of assets		
Software	543	741
Hardware	151	41
Operation assets	10	12
	704	**793**
Professional fees		
Professional fees (operational)	92	248
Professional fees (development)	342	110
Audit fees	59	30
Administrative fees	14	9
	507	**397**
Telecommunication services		
Postal services	6	7
Telephone, internet and transmission lines	50	49
Data-trafficking (T2S, SWIFT, Reuters)	42	15
	98	**71**
Insurance	**15**	**14**

Material type expenses		
Utility bills	35	26
Expenses related to vehicles	6	6
Expenses related to buildings	1	1
Expenses related to IT assets	8	2
Other material type expenses	3	5
	53	**40**

Rental fees		
Rental fees - real estate	0	104
Other rental fees	19	21
	19	**125**

Marketing expenses		
Advertisement	3	2
Sponsorship agreements	0	6
	3	**8**

Training and education		
Professional trainings	13	12
Conferences	24	25
	37	**37**

Taxes on operation		
Sectorial tax on financial institution	177	196
Non-deductible VAT	0	-4
Local taxes	46	37
	223	**229**

Services		
Services related to real estates	109	107
Services related to vehicles	6	4
Services related to transportation and taxi	8	6
Travel expenses, accommodation	18	25
Cost of temporary employment	23	23
Membership fees	22	21
Expenses from other services	61	63
	247	**249**

Levies		
Levies paid to oversight institutions	46	41
Other levies	0	0
	46	**41**
Legal and other procedural fees and stamp duties	**26**	**77**
Other risk related expenses		
Recognition of provisions	**220**	**-786**
Other non-financial activity related expenses	**15**	**1**
Elimination difference due to VAT differences	**146**	**119**

KELER identified that a contract of the Group is onerous therefore a provision was recognized. When recognizing provisions for onerous contract, the Group only considered legal and constructive obligations existed at the end of the reporting period.

The contract has been closed during 2018 and based on the agreement the counterparty has renounced the validation its contractual right. Thus, the former provision is released.

NOTE 31: OTHER INCOME AND EXPENSES, FINANCIAL INCOME AND EXPENSES

Certain sundry incomes and expenses that cannot be classified as operating activities or do not relate to the activity of the Group are presented as other incomes and expenses. These items include gains and losses on disposing property, plant and equipment.

Foreign exchange gains and losses are presented as financial income and expenses together with net interest income of those entities of the Group whose core activity does not include banking services.

NOTE 32: IMPAIRMENT LOSS OF FINANCIAL ASSETS

The impairment loss is calculated based on the expected credit loss model as required by IFRS 9. For instruments other than accounts receivable, the general method is used, where the instruments are classified into three stages. At the end of the reporting period all financial assets are in the first stage and the calculation of the impairment loss allowance is the following:

For the year ending on 31st December 2019:

	Cash and cash equivalents	Placements with other banks	Assets measured at amortized cost	Debt instruments measured at FVTOCI	Receivables relating to clearing and depository activities	Receivables from foreign clearing houses
Opening balance of expected credit loss (ECL)	1	16	2	5	6	3
Changes in the balance of expected credit loss (ECL)	1	-4	0	-2	5	0
Closing balance of expected credit loss (ECL)	**2**	**12**	**2**	**3**	**11**	**3**

For the year ending on 31st December 2018:

	Cash and cash equivalents	Placements with other banks	Assets measured at amortized cost	Debt instruments measured at FVTOCI	Receivables relating to clearing and depository activities	Receivables from foreign clearing houses
Opening balance of expected credit loss (ECL)	0	0	0	0	0	0
Effect of transition to IFRS 9	1	14	2	5	7	2
Changes in the balance of expected credit loss (ECL)	0	2	0	0	-1	1
Closing balance of expected credit loss (ECL)	**1**	**16**	**2**	**5**	**6**	**3**

The effect of transition to IFRS 9 is recognized directly to retained earnings, the changes in the ECL however is taken to the profit or loss (separate line item).

For the calculation the so called 'standard model' is used, where preset PDs and LGDs are applied for the counterparty, using the TTC (Through The Cycle) approach.

For the accounts receivable the simplified method is used, using the ageing approach. This led to the following amounts:

	31.12.2019	**31.12.2018**
	Receivables relating to clearing and depository activities	Receivables relating to clearing and depository activities
Opening balance of expected credit loss (ECL)	6	0
Effect of transition to IFRS 9	0	7
Changes in the balance of expected credit loss (ECL)	5	-1
Closing balance	**11**	**6**

All items are in stage 1 and no transfers between stages took place during the current period. The previous year's figures were not restated, but the transition is recorded as an adjustment to the 2018 opening balances.

NOTE 33: INCOME TAX EXPENSE

Items classified as income taxes in accordance with IAS 12 are listed in Note 9. The rate of the corporate income tax is 9% since 2017, the local tax rate is 2% for decades, and the innovation contribution is 0,3% since it was introduced.
The tax base of latter two is derived from the gross profit (actual gross profit or in case of the depository activity the net interest).

A breakdown of the income tax expense is:

	01.01.2019-31.12.2019	**01.01.2018-31.12.2018**
Income Taxes		
Current corporate income tax	98	29
Deferred corporate income tax	-129	100
Local tax	130	119
Innovation contribution	20	19
	119	**267**

NOTE 34: OTHER COMPREHENSIVE INCOME

The other comprehensive income includes two elements: the revaluation of the debt instruments measured at fair value through other comprehensive income and the deferred tax effect of this.
The balances are reclassified into net profit once the financial instruments are derecognized (expired or sold).

	01.01.2019-31.12.2019	01.01.2018-31.12.2018
Other comprehensive income		
Remeasurement on financial assets measured at FVTOCI	-18	18
Retranslation of foreign operation	-1	1
	-19	**19**

<u>NOTE 35:</u> SECURITIES SAFEGUARDED AND DEPOSITED; OFF BALANCE SHEET ITEMS

Foreign securities means amounts in security accounts of the counterparties.

	NOMINAL (PAR) VALUE 31.12.2019	31.12.2018
SECURITIES		
Physical securities		
Physical securities HUF	86 652	123 178
Physical securities CHF	1 683	1 577
Physical securities USD	0	0
	88 335	**124 755**
Dematerialized securities		
Dematerialized securities HUF	37 432 652	35 613 011
Dematerialized securities AUD	1	143
Dematerialized securities CAD	54	68
Dematerialized securities CHF	28 713	30 722
Dematerialized securities CNY	0	0
Dematerialized securities CZK	71 420	79 325
Dematerialized securities DKK	0	0
Dematerialized securities EUR	2 532 466	2 519 046
Dematerialized securities GBP	6 007	3 978
Dematerialized securities HKD	2	5
Dematerialized securities NOK	3	2
Dematerialized securities PLN	33 023	27 966
Dematerialized securities RON	1 402	233
Dematerialized securities RUB	29	76
Dematerialized securities SEK	1	0
Dematerialized securities SGD	0	0
Dematerialized securities TRY	61	66
Dematerialized securities USD	436 549	318 430
Dematerialized securities ZAR	0	0
	40 542 383	**38 593 071**
	40 630 718	**38 717 826**

NOTE 36: OFF BALANCE SHEET ITEMS

	31.12.2019	31.12.2018
Guarantees received		
Cash		
In HUF	18 634	13 640
In foreign currency	48 209	43 762
Security	37 102	40 779
Bank guarantee	0	1 078
	103 945	**99 259**

	31.12.2019	31.12.2018
Specific safeguards		
Cash		
In foreign currency	18 178	19 756
Bank guarantee	49	41
	18 227	**19 797**

Credit lines	**4 900**	**550**

Under specified circumstances these items may be used by the Group. When certain market irregularity occurs (i.e. insolvency of a participants) the safeguards are used according to strictly regulated order to cover the losses.

The Group received two lines of credit from commercial banks. The main purpose of the credit line is to ensure the liquidity of the gas market (mainly the VAT position).

NOTE 37: RELATED PARTY TRANSACTIONS

A number of transactions are entered into with related parties and owners of the Group in the normal course of business. These include deposit placed and services provided. These transactions were carried out on commercial terms and at market rates. The volumes of related party transactions, outstanding balances at the end of reporting period, and relating income and expense for the year are as follows.

CENTRAL BANK OF HUNGARY	**01.01.2019-31.12.2019**	**01.01.2018-31.12.2018**
Term deposit placements	13 064	10 153
	13 064	**10 153**
Interest income	-3	-2
	-3	**-2**
Bank account costs	14	12
Other costs	0	1
	14	**13**

As stated before the parent of the Group is the Central Bank of Hungary (CBH). CBH is a government-related entity (as defined by IAS 24). This Group uses the exemption in IAS 24.25 and does not make disclosures regarding balances and transactions with other government related entities. These transactions with other government related entities are immaterial and if they exist they are at arm's length condition.

The Parent Company enters into material transactions with the Government Debt Management Agency (ÁKK). These deals are repo transactions. The amount of repo transaction entered into during 2019 was 175 364 million HUF. There were no repo deals open at the end of the reporting period.

The Parent Company enters into material transaction with the Central Bank of Hungary, most of those deals are overnight deposits. The amount of the overnight deposit deals in 2019 was 948 858 million HUF, at the end of the year the overnight deposit balance is 10 150 million HUF (receivables).

Members of the key managements are related parties.

Key management (during the period preparing the financial statements):

Board of Directors of the Parent Company:

- dr.Selmeczi -Kovács, Zsolt, President of the Board
- Mónus Attila, CEO (until: 24th February 2020.)
- Szalai Sándor, banking director (until: 11th January 2019.)
- Demkó-Szekeres Zsolt, banking director (from 13th March 2019.)
- Nagy Márton, member of the Board
- Végh Richárd, member of the Board
- Balogh Csaba Kornél, member of the Board
- Marosi Bence, CEO (from 14th March 2020)

Supervisory Board of the Parent Company

- Bartha Lajos, President of the Supervisory Board (until 25th March 2020)
- Taczmann Róbert Ferenc, President of the Supervisory Board (from 26th March 2020)
- Varga-Balázs Attila (until 25th March 2020)
- Pintér Klára
- Varga Lóránt
- Visontai Balázs (from 26th March 2020)

	01.01.2019-31.12.2019	**01.01.2018-31.12.2018**
Board of Directors	158	136
Supervisory Board	25	23
	183	**159**

These are all short-term employee benefits.

Remunerations above include all type of disbursement paid to members of Directory Board and Supervisory Board. Other than the above stated remuneration no transactions are made with the foresaid people.

Attila Mónus resigned as Chief Executive Officer on 24th February 2020 and at the same time he stepped down as member of the board.

Lajos Bartha resigned as President of the Supervisory Board and at the same time stepped down as member of the Supervisory Board.

Attila Varga-Balázs resigned as member of the Supervisory Board.

On 11 January 2019, Sándor Szalai resigned from the Board of Directors and terminated his employment on 15 February 2019.

The members of the Board of Directors and Supervisory Board also changed by the subsidiary company.

NOTE 38: CLASSIFICATION AND FAIR VALUE OF FINANCIAL INSTRUMENTS

a) Classification of financial instruments

31 December 2019	Financial assets measure at FVTPL	Financial liabilities measured at amortized cost	Securities measure at FVTOCI	Financial liabilities measured at amortized cost	**Total carrying amount**	**Fair value**
Cash and cash equivalents	0	34 722	0	0	**34 722**	**34 722**
Placements with other banks	0	72 913	0	0	**72 913**	**72 913**
Securities (debt instruments)	0	16 446	23 392	0	**39 838**	**40 648**
Receivables relating to clearing and depository activities	0	21 301	0	0	**21 301**	**21 301**
Deposits from customers	0	0	0	142 218	**142 218**	**142 218**
Accounts payable	0	0	0	3 138	**3 138**	**3 138**
Lease Liability	0	0	0	360	**360**	**360**

31 December 2018	Financial assets measure at FVTPL	Financial liabilities measured at amortized cost	Securities measure at FVTOCI	Financial liabilities measured at amortized cost	**Total carrying amount**	**Fair value**
Cash and cash equivalents	0	28 970	0	0	**28 970**	**28 970**
Placements with other banks	0	50 045	0	0	**50 045**	**50 045**
Securities (debt instruments)	0	14 232	35 380	0	**49 612**	**50 317**
Receivables relating to clearing and depository activities	0	25 316	0	0	**25 316**	**25 316**
Deposits from customers	0	0	0	123 330	**123 330**	**123 330**
Accounts payable	0	0	0	5 241	**5 241**	**5 241**
Lease Liability						

b) Assets and liabilities measured at fair value – Fair value hierarchy

31 December 2019	Fair value Level 1	Fair value Level 2	Fair value Level 3	Total
Debt instruments measured at fair value through other comprehensive income		23 392		**23 392**

31 December 2018	Fair value Level 1	Fair value Level 2	Fair value Level 3	Total
Debt instruments measured at fair value through other comprehensive income		35 380		**35 380**

c) Assets and liabilities measured at non-fair value – Fair value hierarchy

31 December 2019	Fair value Level 1	Fair value Level 2	Fair value Level 3	Total
Cash and cash equivalents	34 722	0	0	**34 722**
Placements with other banks	0	0	72 913	**72 913**
Receivables relating to clearing and depository activities	0	0	21 301	**21 301**
Debt instruments measured at amortized cost (MÁK)	0	16 446	0	**16 446**
Deposits from customers	0	0	142 218	**142 218**
Accounts payable	0	0	3 138	**3 138**
Lease liability	0	0	360	**360**

31 December 2018	Fair value Level 1	Fair value Level 2	Fair value Level 3	Total
Cash and cash equivalents	28 970	0	0	**28 970**
Placements with other banks	0	0	50 045	**50 045**
Receivables relating to clearing and depository activities	0	0	25 316	**25 316**
Debt instruments measured at amortized cost (MÁK)	0	14 232	0	**14 232**
Deposits from customers	0	0	123 330	**123 330**
Accounts payable	0	0	5 241	**5 241**
Lease liability				

No items were classified as fair value through profit or loss, or held to maturity during the years presented.
Receivables or similar items including counter party risk where the risk factor is not readily determinable are classified under Level 3 measurement.

NOTE 39: TRANSITION TO IFRS 16

The Group applies IFRS 16 starting from 1st January 2019. The standard requires to capitalize all leases that are not classified as short term lease or does not have an underlying asset that is low value. The Group classified all contracts to be leases that met the definition of the lease under IAS 17 and were still ongoing on 1st January 2019 and did not consider those contracts to be leases that were not classified as leases before that date. The new lease definition will be applied for contracts entered into after 1st January 2019.

Based on the above facts the following leases were identified:

- the lease of the office building;
- the lease of the building that holds the backup IT system.

On transition the Group applied the modified retrospective method which required the recognition of a ROU and a lease liability as of 1st January 2019. For the transition the simplified method was applied, therefore the value of the ROU was the same with the discounted cash flows from contract as at transition date. The Group did not use any practical expedient when first applying the standard.

The recognized lease liability on transition was 422 million HUF. The same amount was recognized as ROU. The Group used the incremental borrowing rate when calculating the discounted cash flows, ie. 3,82%.

Together with the ROU and lease liability an asset retirement obligation was recognized since the asset must be reinstated in its original state. The value of the ARO is 27 million HUF, discounted. When unwinding the discount, the Group uses the same rate as it is using for the lease itself.

In the first year the lease decreased the net profit by 110 million HUF (interest, depreciation and FX difference) and the total cash outflow was 89 million HUF.

NOTE 40: NEW STANDARDS AND INTERPRETATIONS NOT YET ADOPTED

The Group did not change its' accounting policies from 2018 to 2019, except the introduction of the new standard and preparing policies for those issues that did not yet occur.

The following amendments to the existing standards and new interpretation issued by the International Accounting Standards Board (IASB) and adopted by the EU are effective for the current reporting period:

- **Amendments to various standards due to "Improvements to IFRSs (cycle 2015 -2017)"** resulting from the annual improvement project of IFRS (IFRS 3, IFRS 11, IAS 12 and IAS 23) primarily with a view to removing inconsistencies and clarifying wording – adopted by the EU on 14 March 2019 (effective for annual periods beginning on or after 1 January 2019),
- **Amendments to IAS 19 "Employee Benefits"** - Plan Amendment, Curtailment or Settlement – adopted by the EU on 13 March 2019 (effective for annual periods beginning on or after 1 January 2019),
- **Amendments to IAS 28 "Investments in Associates and Joint Ventures"** - Long-term Interests in Associates and Joint Ventures – adopted by the EU on 8 February 2019 (effective for annual periods beginning on or after 1 January 2019),
- **IFRIC 23 "Uncertainty over Income Tax Treatments"** – adopted by the EU on 23 October 2018 (effective for annual periods beginning on or after 1 January 2019).
- **Amendments to IFRS 9 "Financial Instruments"** - Prepayment Features with Negative Compensation – adopted by the EU on 22 March 2018 (effective for annual periods beginning on or after 1 January 2019),
- **IFRS 16 "Leases"** – adopted by the EU on 31 October 2017 (effective for annual periods beginning on or after 1 January 2019),

See the effects of introduction of IFRS 16 Leases standard in Note 39.

The adoption of other new standard and amended standards and interpretations to the existing standards has not led to any material changes in the Group's financial statements.

<u>New and revised Standards and Interpretations issued at the date of authorization of financial statements but not yet effective, early adoptions</u>

The followings present standards and interpretations with effective date only after the date of authorization of these financial statements. The Group anticipates that the adoption of these new standards, amendments to the existing standards and new interpretations will have no material impact on the financial statements of the Group in the period of initial application.

The following standards and interpretations (including the amendments of those) will be effective in 2020 financial year or later.

Standards and Interpretations adopted but not yet effective

- **Amendments to IAS 1 "Presentation of Financial Statements" and IAS 8 "Accounting Policies, Changes in Accounting Estimates and Errors"** - Definition of Material – adopted by EU on 10 December 2019 (effective for annual periods beginning on or after 1 January 2020),
- **Amendments to IFRS 9 "Financial Instruments", IAS 39 "Financial Instruments: Recognition and Measurement", IFRS 7 "Financial Instruments: Disclosures" – Interest rate Benchmark Reform** – adopted by EU on 15 January 2020 (effective for annual periods beginning on or after 1 January 2020),
- **Amendments to References to the Conceptual Framework in IFRS Standards** – adopted by EU on 6 december 2019 (effective for annual periods beginning on or after 1 January 2020).

The Group does not anticipate significant changes to Group's financial statements from effects of other changes of IFRS's (except mentioned previously.)
The Group does not adopt these new standards and amendments to existing standards before their effective date. The Group anticipates that the adoption of these new standards, amendments to the existing standards and new interpretations will have no material impact on the financial statements of the Group in the period of initial application.

Standards and Interpretations issued by IASB but not yet adopted by the EU

At present, IFRS as adopted by the EU do not significantly differ from regulations adopted by the International Accounting Standards Board (IASB) except for the following new standards, amendments to the existing standards and new interpretation, which were not endorsed for use in EU as at [date of publication of financial statements] (the effective dates stated below is for IFRS in full):
- **IFRS 14 "Regulatory Deferral Accounts"** (effective for annual periods beginning on or after 1 January 2016) - the European Commission has decided not to launch the endorsement process of this interim standard and to wait for the final standard,
- **IFRS 17 "Insurance Contracts"** (effective for annual periods beginning on or after 1 January 2021),

- **Amendments to IFRS 3 "Business Combinations"** - Definition of a Business (effective for business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after 1 January 2020 and to asset acquisitions that occur on or after the beginning of that period),
- **Amendments to IFRS 10 "Consolidated Financial Statements" and IAS 28 "Investments in Associates and Joint Ventures"** - Sale or Contribution of Assets between an Investor and its Associate or Joint Venture and further amendments (effective date deferred indefinitely until the research project on the equity method has been concluded).
- **Amendments to IAS 1 "Presentation of Financial Statements"** - Classification of Liabilities as Current or Non-Current (effective for annual periods beginning on or after 1 January 2022),

The Group anticipates that the adoption of these new standards, amendments to the existing standards and new interpretations will have no material impact on the financial statements of the Group in the period of initial application.

Others

Portfolio hedge of financial assets and financial liabilities is not regulated, because the concerning regulation is not adopted by the EU.

The Group anticipates that application of hedge accounting rules of portfolio hedge of financial assets and financial liabilities in IFRS 9 will have no material impact on the financial statements of the Group at the end of reporting period.

NOTE 41: DISCLOSURE OF INTERESTS IN OTHER ENTITIES

The Group did not face any uncertainty or had to deal with any more complex issues when it considered how its investments would be treated in terms of consolidation.

In the subsidiaries the Parent have a voting right of 99.81%. There was no need to identify a non-controlling interest within the Group because each subsidiary of the subsidiary is controlled by the ultimate parent company.

The Group has no associated company.

The Group does not have to face any restrictions on its access to net assets, profit or cash flow in the context of its consolidated business.

The Group has no consolidated or unconsolidated interests in which control is not based on voting rights or where voting rights are not used to control the relevant activities leading to control (structured entities).

The Group has an immaterial investment in Association of National Numbering Agencies (ANNA). The value of the investment is 1 250 EUR and is recorded as an equity investment measured at FVTOCI.

NOTE 42: CHANGES IN THE ACCOUNTING POLICIES

The Group did not change its accounting policies in 2019, except the application of IFRS 16.

NOTE 43: DIVIDEND

The General Meeting of KELER has decided on 4 000 M HUF dividend payment on May 29, 2019, that was financially settled by KELER.
The General Meeting of KELER CCP has decided on May 29, 2019 that no dividend will be paid to 2018 financial year.

NOTE 44: SUBSEQUENT EVENTS

The following items happened after the end of the reporting period. The effect of these cannot be included in these financial statements, but due to their nature, they should be disclosed.

Changes in the management

Both the Parent and the Subsidiary reorganized it's Board of Directors and it's Supervisory Board. Note 37 explains the changes in details.

Changes in business – energy market

From 2020 the settlement place of the energy market – due to the regulation – changes. This will require KELER KSZF to correspond with the so called settlement banks who will deal with the security deposits, which will be segmented by markets and by customer. The Parent will stop dealing with the deposit from this time. The change will lead to the material increase in the bank deposit and liability, which will materially increase the balance sheet total (without any effect on the net profit)

From 2020 the gas trading platform – that is operated by FGSZ Zrt. – will be settled in euro and not in forint. The foreign exchange risk will not materially change since both segment of the deal will be accounted for in euro.

Changes in the IT systems

The management of the Group decided that they will develop a new core system, which will be done through the development of the currently used software. The project was launched in 2019.

Further material events that will change the business – COVID-19 corona virus pandemic

The corona virus pandemic changed the social and economic environment substantially in 2020. The management of the Group concluded that these events are non-adjusting for 2019. The effects of the epidemic are still under review. The Group monitors the availability of work force, its supply chain and the purchasing power of the relevant markets.

The KELER Group was identified being one of the entities with key importance in the national economy (see regulation 12/2016.). The KELER Group was also identified as playing a key role in the economic system by the Action Group for the Security of Key Hungarian Undertakings.

The management of the Group – responding to the domestic and international events – immediately provided the operational conditions that enables KELER to work without disturbance.

Unlike for most of the companies the pandemic did not result in a direct consequence on the activity of the KELER Group. The key elements of the activity of the Group resulting the biggest contributions are:

- Security trading services
  If the correctional steps of the government will result in issuing new government bonds, treasury bills, we expect an increase in the revenue from the escrow fees, however due to the calculation logics of this fee we expect a decline in the revenue for the equity instruments (where the fee is calculated based on the listed price)
- Services for issuers
  If the pandemic worsens or remains at the same level, due to the cancelled and postponed corporate events we expect smaller revenues from this segment.
- Income from capital markets – due to the increased trading activity – may increase for revenues on the short run, but if investments are removed from capital markets, it may reduce income.
- The energy markets and guarantee services are not expected to be materially influenced by the pandemic, however new partners are not expected to be recruited.
- Interest income - due to the expected recession, the increasing yields may improve the reinvestment possibilities. Currently the portfolio of KELER is such that the average yield is above the currently available on the market, however items in the trading book will need to be slightly revalued downwards. However the realization of this loss (sale) is currently not required, due to the well managed liquidity requirements. The invested portfolio will not be revalued since the accounting policy of the Group does not require that. Out of the

portfolio the sensibility of the trading book is a bit above 10%. The customer funds deposited by KELER are stable, the increase in the required guarantee deposit positively influenced the liquity position of KELER.

We do not expect material change in the expenditures of KELER Group.

The Group acquired additional assets and licences to enable most of the colleagues to work remotely. The approach followed around these purchases were the proportionality, therefore a few million forint was used for these extra purchases.

All together based on current information KELER does not currently need business/financial replanning – how it is described in the business continuation plan. It seems that the business activities are not going to be materially disturbed. The middle- and long term effects of this pandemic cannot be easily assessed at this stage.

Based on the above facts the management of the Parent Company there are no signs yet identified that would suggest that the going concern of the Group cannot be justified, and so far no material effect for the year 2020 was identified.

NOTE 45: APPROVAL OF THE FINANCIAL STATEMENTS

These consolidated financial statements were authorized for issue by the Board of Directors on 5 May 2020. KELER's General Meeting is entitled to approve the consolidated financial statements

Budapest, 5 May 2020

KELER Központi Értéktár Zrt.
KELER Zrt.
5.

Marosi, Bence
Chief Executive Officer

Kreutzer, Richard
Chief Financial Officer