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Measuring the Impact of Credit Risks on the quality of accounting information: A Comparative Study between Kurdistan International Islamic Bank for Investment and Development and Islamic Iraqi Bank

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Abstract: This research aims to verify the relationship between credit risk and the quality of accounting information, as it provides a comprehensive analysis of the impact of credit risk as an independent variable on the quality of accounting information as a dependent variable in Kurdistan International Islamic Bank for Investment and Development (KIIB) in Erbil with a comparative analysis with the Islamic Iraqi Bank for Investment and Development (IIB), covering the period from 2005 to 2021. The empirical analysis, using quantitative research design, was conducted through multiple regression models, relying on the financial data taken from the annual financial reports of the two banks to measure the research variables and to find the strength and direction of the relationship between them. The results of the research confirmed the validity of its hypothesis based on the existence of a statistically significant relationship between credit risk and the quality of accounting information represented in relevance and reliability, and statistical analysis revealed positive parameters associated with credit risk. The positive and significant impact of credit risks on quality of accounting information implies that the bank faces a trade-off between risk and quality. This research contributes to enhancing confidence in Islamic banks, achieving transparency in their financial reports, and providing practical recommendations to professionals, regulators and decision-makers, especially in the presence of effective risk management.

قياس أثر مخاطر الائتمان على جودة المعلومات المحاسبية: دراسة مقارنة بين مصرف كردستان الدولي الإسلامي للاستثمار والتنمية والمصرف الإسلامي العراقي

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المستخلص

يهدف هذا البحث إلى التحقق من العلاقة بين مخاطر الائتمان وجودة المعلومات المحاسبية، حيث يقدم تحليلاً شاملاً لتأثير مخاطر الائتمان كمتغير مستقل على جودة المعلومات المحاسبية كمتغير تابع في بنك كردستان الدولي الإسلامي للاستثمار والتنمية (KIIB) في أربيل مع تحليل مقارنة مع البنك الإسلامي العراقي للاستثمار والتنمية (IIB)، والذي يغطي الفترة من 2005 إلى 2021. تم إجراء التحليل التجريبي باستخدام تصميم البحث الكمي من خلال نماذج الانحدار المتعدد، بالاعتماد على البيانات المالية المأخوذة من التقارير المالية السنوية للبنكين لقياس متغيرات البحث وإيجاد قوة واتجاه العلاقة بينهما. أكدت نتائج البحث صحة فرضيته القائمة على وجود علاقة ذات دلالة إحصائية بين مخاطر الائتمان وجودة المعلومات المحاسبية المتمثلة في الملاءمة والموثوقية، وكشف التحليل الإحصائي عن معايير إيجابية مرتبطة بمخاطر الائتمان. إن التأثير الإيجابي والهام لمخاطر الائتمان على جودة المعلومات المحاسبية يعني أن البنك يواجه مقايضة بين المخاطر والجودة. يُسهم هذا البحث في تعزيز الثقة بالمصارف الإسلامية، وتحقيق الشفافية في تقاريرها المالية، وتقديم توصيات عملية للمختصين والجهات الرقابية وصناع القرار، لا سيما في ظل وجود إدارة فعّالة للمخاطر.

الكلمات المفتاحية: مخاطر الائتمان، جودة المعلومات المحاسبية.

1. Introduction:

The banking sector plays an important role in achieving economic stability. In a complex and high-risk market world, the integrity of accounting information can be compromised (Barth, et al. 2001). These risks have the potential to undermine the financial stability of banks and distort the transparency of financial statements (Altman & Saunders, 1998). Banks may face pressure to hide certain financial information, or manipulate to reduce the bad mental image of risk. Hence, effective risk management is a guarantee of the quality of financial reports that have the basic characteristics of accounting information such as appropriateness and reliability (Bushman & Williams, 2015).

Bankers were interested in Banking risks management and the successive financial and banking crises that faced the world, from the Mexico crisis in 1994 to the crises of Southeast Asian and Brazilian countries and the financial crisis of American banks, and the resulting bankruptcy of the largest American banks, which turned out to be one of the most important

reasons for the exacerbation of banking risks and weak management on the one hand, and the lack of supervision at the required level on the other hand. The diversity and expansion of banking services has contributed to the increased interest in banking risk management (Al-Naami and Al-Amawi, 2015).

2. Research Problem:

Islamic banking in Iraq faces challenges related to understanding and managing risks, so this research addresses the gap in understanding the interaction between credit risk and the quality of accounting information for financial statements, as financial statements are the main pillar in the process of planning, forecasting and decision-making. Therefore, this research seeks to answer the following question: Is there a statistically significant relationship between credit risk and the quality of accounting information? This question should specifically be examined in the Kurdistan International Islamic Bank, while conducting a comparative analysis with the Iraqi Islamic Bank for the period (2005-2021).

3. Research hypothesis:

There is a statistically significant effect between credit risk and the quality of accounting information (a comparative Study between Kurdistan International Islamic Bank for Investment and Development and Islamic Iraqi Bank)

This hypothesis was formulated to obtain an answer to the research question, and to reach results in line with the objectives of the research. These motivations are supported under agency theory and signalling theory to explain the relationship between research variables.

4. Importance of the research

4.1 Theoretical importance: The subject of this research paves the way for future studies as an important source for academics and researchers to adopt new auditing practices and effective risk management that help identify and reduce uncontrolled risks that negatively affect the quality of financial reporting.

4.2 Practical importance: The topic of this research is of paramount importance for several reasons:

A. Financial Stability: Effective credit risk management is crucial for the stability of financial institutions and the broader financial system. Poorly

managed credit risks can lead to significant financial losses and systemic crises, as evidenced by past financial collapses (Acharya et al., 2012).

- B. Investor Confidence: High-quality financial reporting enhances investor confidence by providing reliable and comparable financial information. This is essential for the efficient functioning of capital markets and for attracting investment (Barth et al., 2008).
- C. Regulatory Compliance: Adherence to IFRS ensures that financial institutions comply with international standards, which is increasingly important in a globalized economy. This compliance facilitates cross-border investment and financial integration (Ball, 2006).
- D. Enhanced Oversight: Understanding the impact of credit risk auditing on financial reporting quality can help regulators design more effective oversight frameworks. This is crucial for ensuring that financial institutions operate transparently and are held accountable for their risk management practices (Basel Committee on Banking Supervision, 2011).

5. Theoretical literature review

5-1. Credit risk and risk management: The Islamic Financial Services Board (IFSB, 2005) defined credit risk as the risk arising from the possibility that a party may not fulfill its obligations in accordance with the agreed terms. This definition seems to have highlighted two points. First, it clarified the inability of the borrower to fulfill their obligations due to some circumstances that render them unable to, as if there had been a reliance on the existence of good faith on the part of the borrower, but his financial inability is the reason for the non-fulfilment, and the second gesture: that the borrowing party may repay, but not according to the agreed terms, which constitute a problem for the bank, perhaps less severe than non-compliance, mainly by repayment. However, it inflicts direct financial losses to the bank. Banks with a strong credit risk management framework are better positioned to manage potential losses, and can reflect a true picture of their financial position (Beatty & Liao, 2014). (Laeven & Majnoni, 2003) provided empirical evidence that credit risk assessment practices are a driver in calculating conservative allocations to meet those risks. Assessing the Bank's credit risk management processes and their implications for financial reporting lies by focusing on high-risk areas, in order to avoid the possibility of misreporting and enhance the reliability of financial statements (Bholat et

al. 2018). Thus, providing stakeholders with relevant information for decision-making (Defond & Zhang, 2014).

5-2. Credit risk and quality of accounting information: FASB and IASB issued Statement No. (8) of 2010 the Comprehensive Conceptual Framework for Financial Reporting, which emphasizes two key characteristics: relevance and reliability (Faithful Representation) (FASB,2018); (Hamidawi, Mahawesh, 2016). The quality of accounting information reflects a set of qualitative characteristics of accounting information. The property of relevance is one of the basic qualitative characteristics of accounting information, and means that the accounting information is appropriate to the needs of decision makers, helping to evaluate past and present events to predict future events (Kieso et al., 2020); (Mahmoud, 2016). The second characteristic is reliability (Faithful Representation), which means ensuring that this information is reasonably free of errors and bias and that it truthfully represents what it claims to represent, i.e. reflects the reality of financial events (Kieso et al., 2020); (Armouti, 2013). The study (Monjed & Ibrahim, 2020) ;(Ahmad,2021) concluded that increasing credit risk constitutes an incentive to practice earnings management, which in turn affects the quality of accounting information, which reflects the quality of financial reporting. The study (Barth et al,2008) ;(Ivashina & Scharfstein,2010) also indicated that the increase in risk disclosure, especially with regard to credit risk, leads to an increase in the transparency of accounting information and contributes to raising the quality of financial reports. Therefore, the effectiveness of credit risk management plays an essential role in ensuring financial stability and the extent of its impact on market perceptions. The reliability (Faithful Representation) of financial reporting is improved through an accurate and comprehensive risk assessment that reflects the efficiency and effectiveness of risk management practices, by reducing the likelihood of material errors (Bushman & Williams, 2015). (Beatty, Ke & Petroni, 2002); (Cohen et al., 2017) show that banks with effective credit risk management and auditing practices maintain greater financial stability and transparency, which is critical to gaining investor confidence. Al-Tamimi and Al-Mazrooei (2007) noted that Islamic banks with an integrated risk management framework tend to report high-quality financial information. The UAE Central Bank's regulatory directives support enhanced financial reporting and risk management

practices. Beatty and Liao (2014) add that effective credit risk management improves the quality of financial reporting and enhances market confidence. According to Basel Committee on Banking Supervision (2011) effective risk management practices contribute to increasing the accuracy of financial disclosures and reducing financial reporting errors.

In summary, the adoption of effective risk management practices, the adoption of international standards, and regulatory improvements enhance transparency, relevance, and reliability of financial reporting in maintaining market confidence and supporting financial stability.

6. Research Design and Data Collection

The study adopts a quantitative research design, employing statistical analysis to test the hypotheses related to the quality of accounting information. The sample consists of financial data from the Kurdistan International Islamic Bank for Investment and Development (KIIB) and a comparative analysis with Iraqi bank (IIB) over the period 2005 to 2021 .

7. Analytical Method

This study is exploratory according to the quantitative method. To evaluate the relationships between credit risk and the quality of accounting information, the study utilizes simple linear regression analysis. To measure the strength and direction of the relationship between the independent variable (credit risk), as measured in the appendix, and the dependent variable (quality of accounting information). This is done by using statistical analysis to verify the validity of the hypothesis.

Tables presented in the following sections will detail the results of the regression analysis, including regression parameters, which is useful in measuring the property of relevance and reliability. These results are crucial for substantiating the research hypotheses and offering insights into the impact of credit risk on the quality of accounting information.

The results of many researches and studies confirmed that the Francis model is one of the most accurate models for measuring the qualitative characteristics of accounting information, by virtue of the fact that the measure uses total accruals, and that the property of relevance is available in accounting accrual information. (Chen & Gong, 2019) indicate that it is possible to use accrual quality as an alternative to express relevance and credibility in financial reporting. These are fundamental considerations for investors. This model indicates that the quality of accrual is affected by

current, past, and future operating cash flows. This means that the quality of accrual reflects the continuity and predictability of operating cash flow. And the study relied on the model of (Francis, et al, 2004) to measure the qualitative characteristics (relevance), as in the following regression model:

$$\text{TACC } i,t / \text{Assets } i,t = \beta_0 + \beta_1 (\text{CFO } i,t-1 / \text{Assets } i,t) + \beta_2 (\text{CFO } i,t / \text{Assets } i,t) + \beta_3 (\text{CFO } i,t+1 / \text{Assets } i,t)$$

Whereas:

TACC_{i,t}: total Accruals to bank i during the year t.

Assets_{i,t}: Total assets of the bank at the end of the year t.

CFO_{i,t}: Cash flow from Bank i's during the year t.

CFO_{i,t-1}: Cash flow operations from Bank i during the previous year.

CFO_{i,t+1}: Cash flow operations from Bank i during the next year.

$$\text{TACC}_{i,t} = \text{NI}_{i,t} - \text{CFO}_{i,t}$$

OR:

$$\text{TACC}_{i,t} = \Delta \text{CA}_{i,t} - \Delta \text{CL}_{i,t} - \Delta \text{CASH}_{i,t} - \text{Dep}_{i,t}$$

Whereas:

TACC_{i,t}: total receivables to bank i during year t.

ΔCA_{i,t}: change in current assets of bank i during the year t.

ΔCL_{i,t}: change in current liabilities of bank i during the year t.

ΔCASH_{i,t}: change in cash of bank i during the year t.

Dep_{i,t}: depressions and amortization of bank i during the year t.

$$\text{CFO} = \text{NI} - \text{TACC}$$

Whereas:

CFO: Cash Flow Operating.

NI: Net income.

TACC: Total accruals.

After proving the significance of the regression equation, the researcher tests the research hypothesis related to the impact of credit risk (as an independent variable) on the quality of accounting information (represented by relevance) (as a dependent variable). The research used the method of discretionary accruals to measure the quality of accrual (to express the property of relevance), which is based on the basic assumption that the total accruals are divided into two categories of nondiscretionary accruals that management cannot manipulate, and discretionary accruals to express the property of relevance because it is the part that management can manipulate through exploiting the flexibility available to influence

accounting figures (ALkhayyat et al, 2024),(khansalar, E,2012),(Yaaqoub B,Jassim,2018). As in the following regression equation:

$$\text{Accrual quality} = \beta_0 + \beta_1(\text{Risk credit}) + \varepsilon$$

The Kim and Kross (Kim M & Kross W,1998) model will be used to measure the reliability (Faithful Representation) of financial statements by relying on future operating cash flow and its relationship to accruals related to current assets and short-term liabilities that generate operating income based on the possibility of its recovery within a year. The main idea of the Kim & Kross model focuses on the reliability of accounting information represented by declared earnings and its impact on future operating cash flow by focusing on the relationship between accounting information and a company's performance in the market that can affect investor decision, as shown below (Kythreotis, A. (2014):

$$\text{CFO}_{i,t+1}/\text{Assets}_{i,t} = \beta_0 + \beta_1 (\text{CFO}_{i,t}/\text{Assets}_{i,t}) + \beta_2 (\text{acc}_{i,t}/\text{Assets}_{i,t}) + U_{i,t+1}$$

Whereas:

CFO_{i,t+1}: Cash flows from Bank I's operating activities for the next year.

CFO_{i,t}: Cash flows from the operating activities of Bank I during the year.

Assets_{i,t}: Total assets of the bank at the end of the year t.

Acc_{i,t}: Total Accruals. It is calculated as follows:

$$\text{Acc}_{i,t} = \text{DWC} - \text{DEP}$$

Whereas:

DWC: {(Change in net receivables + change in current assets)} - {(Change in creditors - Change in tax - Change in current liabilities)}.

DEP: Depressions.

U_{i,t+1}: Remaining.

After proving the significance of the regression equation, the researcher tests the research hypothesis related to the impact of credit risk (as an independent variable) on the quality of accounting information (represented by reliability) (as a dependant variable). The research used future cash flows to express reliability. As in the flowing regression equation:

$$\text{Future cash flow from operations} = \beta_0 + \beta_1(\text{Risk credit}) + \varepsilon$$

Note that the financial statements in the presented tables prepared by the researcher are taken from the annual reports published in the Iraq Stock Exchange.

Table (1): The data to measure the relevance characteristic is from Kurdistan International Islamic Bank for the years 2005 to 2021

total assets of the previous year	Total Accruals	Depreciation	Change in cash	Change in current liabilities	Change in Current assents	Net Income	Year
60669999	0	0				-125713	2005
123701866	-38593038	521227	36927325	62467996	61323510	563872	2006
128446487	-15977546	663618	15767497	-358822	94747	5178442	2007
252165648	-112894035	1168032	119787356	112659706	120721059	11312635	2008
354987851	-11452871	1249998	15277720	91489286	96564133	13232918	2009
490465142	-62217515	1629259	111514324	81425859	132351927	9088103	2010
600602245	-78879189	1960799	147837603	36104564	107023777	24032538	2011
1031799376	-216124083	3100569	391029180	247149776	425155442	34047355	2012
1077019849	70982590	2062285	-42916931	8854831	38982775	36365641	2013
1061321504	26318670	2172529	-829611	-53427995	-25766407	37729651	2014
1022533002	32771041	2557673	-1838559	-81164501	-47674346	42376000	2015
959325675	26949038	4640574	30155579	-113786795	-52041604	47129775	2016
1062107860	-85254648	3840112	122640782	61637010	102863256	41495180	2017
1262959834	-192170438	4286491	211106545	180530528	203753126	7117382	2018
1245661690	34614162	5788945	-51567642	-3614245	-14778780	2008065	2019
1445018764	-172354378	4371126	182544643	188765285	203326676	10991789	2020
1416579794	30417059	4056119	-26716188	-34494445	-26737455	5218561	2021

In thousand Iraqi dinars

Table (2): The data to measure the relevance characteristic is from Islamic Iraq Bank for the years 2005 to 2021

total assets of the previous year	Total Accruals	Depreciation	Change in cash	Change in current liabilities	Change in Current assents	Net Income	Year
41314168	514163	19911				353609	2005
44393617	-866729	23360	334187	3387980	2878798	-255289	2006
45778628	-1589757	81280	1482404	1480985	1454912	-2857	2007
52568725	807522	101353	-5929738	8061691	3040828	-203523	2008
84845675	-5989876	154354	36836053	5104842	36105373	505878	2009
80272843	14295301	163440	-14911773	-4673159	-5126191	99201	2010
310103679	-116933439	166400	172111002	166902460	222246423	11735005	2011
373682873	69281558	221017	-12254494	2772260	60020341	22453174	2012
455486699	22278929	447030	34284066	25570769	82580794	27710242	2013
471442666	13026095	929868	15899066	-16174189	13680840	6630156	2014
478478052	10232686	1063362	-5867307	-1013402	4415339	7678153	2015
447196700	-30911734	1717886	18684070	-21076766	-31586544	6958038	2016
469739636	-13671874	2102377	19778897	15302200	23511600	7088260	2017
504542790	-33736324	1742508	25976001	39364943	33347128	5039911	2018
782159287	-159221507	2058142	156993243	262796559	262626437	11893643	2019
806091845	11883500	1690772	11913639	967809	26455720	15194087	2020
916171473	-121051649	998665	96596822	121303204	97847042	6628338	2021

In thousand Iraqi dinars

Table (3): The data needed to calculate the slope values for the time period (2005-2021) at the Kurdistan International Islamic Bank

total assets of the previous year	The bank's operating cash flow during the next year	The bank's operating cash flow during the previous year	The bank's operating cash flow during the year t	Total Accruals	Total income	Year
60669999	39156910	0	9238623	-9364336	-125713	2005
123701866	21155988	9238623	39156910	-38593038	563872	2006
128446487	124206670	39156910	21155988	-15977546	5178442	2007
252165648	24685789	21155988	124206670	-112894035	11312635	2008
354987851	71305618	124206670	24685789	-11452871	13232918	2009
490465142	102911727	24685789	71305618	-62217515	9088103	2010
600602245	250171438	71305618	102911727	-78879189	24032538	2011
1031799376	-34616949	102911727	250171438	-216124083	34047355	2012
1077019849	11410981	250171438	-34616949	70982590	36365641	2013
1061321504	9604959	-34616949	11410981	26318670	37729651	2014
1022533002	20180737	11410981	9604959	32771041	42376000	2015
959325675	126749828	9604959	20180737	26949038	47129775	2016
1062107860	199287820	20180737	126749828	-85254648	41495180	2017
1262959834	-32606097	126749828	199287820	-192170438	7117382	2018
1245661690	183346167	199287820	-32606097	34614162	2008065	2019
1445018764	-25198498	-32606097	183346167	-172354378	10991789	2020
1416579794	114029489	183346167	-25198498	30417059	5218561	2021

In thousand Iraqi dinars

Table (4) The data needed to calculate the slope values for the time period (2005-2021) the Islamic Iraq Bank

total assets of the previous year	The bank's operating cash flow during the next year	The bank's operating cash flow during the previous year	The bank's operating cash flow during the year t	Total Accruals	Total income	Year
41314168	611440	0	-160554	514163	353609	2005
44393617	1586900	-160554	611440	-866729	-255289	2006
45778628	-1011045	611440	1586900	-1589757	-2857	2007
52568725	6495754	1586900	-1011045	807522	-203523	2008
84845675	-14196100	-1011045	6495754	-5989876	505878	2009
80272843	128668444	6495754	-14196100	14295301	99201	2010
310103679	-46828384	-14196100	128668444	-116933439	11735005	2011
373682873	5431313	128668444	-46828384	69281558	22453174	2012
455486699	-6395939	-46828384	5431313	22278929	27710242	2013
471442666	-2554533	5431313	-6395939	13026095	6630156	2014
478478052	37869772	-6395939	-2554533	10232686	7678153	2015
447196700	20760134	-2554533	37869772	-30911734	6958038	2016
469739636	38776235	37869772	20760134	-13671874	7088260	2017
504542790	171115150	20760134	38776235	-33736324	5039911	2018
782159287	3310587	38776235	171115150	-159221507	11893643	2019
806091845	127679987	171115150	3310587	11883500	15194087	2020
916171473	205579280	3310587	127679987	-121051649	6628338	2021

In thousand Iraqi dinars

To estimate the level of regression in the regression model, it is necessary to first measure the dependent variable T based on the consideration that it depends on the predictor variables X1, X2, and X3. The tables (5&6) below illustrate the measurement of the relevant variables in the regression model.

Table (5): Measurement of variables in the regression model at the Kurdistan International Islamic Bank

Year	TACCI,t / Assets _{i,t}	CFO _{i,t-1} / Assets _{i,t}	CFO _{i,t} / Assets _{i,t}	CFO _{i,t+1} / Assets _i
2005	-0.154348709		0.15227663	0.64540812
2006	-0.311984283	0.074684589	0.316542598	0.171024001
2007	-0.124390681	0.304849988	0.16470663	0.966991569
2008	-0.447697916	0.083897185	0.492559835	0.09789513
2009	-0.032262713	0.349889918	0.069539814	0.20086777
2010	-0.126854102	0.050331383	0.145383661	0.209824752
2011	-0.13133349	0.118723529	0.171347556	0.416534304
2012	-0.209463281	0.099740055	0.242461319	-0.033550077
2013	0.065906483	0.232281177	-0.032141422	0.010594959
2014	0.024798018	-0.032616836	0.010751672	0.009049999
2015	0.032048883	0.011159523	0.0093933	0.019736025
2016	0.028091647	0.010012198	0.021036377	0.132123878
2017	-0.080269294	0.019000647	0.119338	0.187634258
2018	-0.152158788	0.10035935	0.157794266	-0.025817208
2019	0.027787771	0.159985509	-0.026175724	0.147187771
2020	-0.119274837	-0.02256448	0.126881513	-0.01743818
2021	0.021472182	0.129428761	-0.017788266	0.003596222

Table (6): Measurement of variables in the regression model at the Islamic Iraq Bank

Year	TACCI,t / Assets _{i,t}	CFO _{i,t-1} / Assets _{i,t}	CFO _{i,t} / Assets _{i,t}	CFO _{i,t+1} / Assets _i
2005	0.012445198		-0.003886173	0.014799766
2006	-0.01952373	-0.003616601	0.013773151	0.03574613
2007	-0.034727056	0.013356451	0.034664647	-0.022085524
2008	0.015361263	0.03018715	-0.019232823	0.123566893

Year	TACCI,t / Assets _{i,t}	CFO _{i,t-1} / Assets _{i,t}	CFO _{i,t} / Assets _{i,t}	CFO _{i,t+1} / Assets _i
2009	-0.070597305	-0.011916282	0.076559636	-0.167316719
2010	0.178083901	0.080920941	-0.176848103	1.602888838
2011	-0.377078529	-0.04577856	0.414920727	-0.151008799
2012	0.185402016	0.344325238	-0.125315842	0.014534552
2013	0.048912359	-0.102809553	0.011924197	-0.014041989
2014	0.027630285	0.011520623	-0.013566738	-0.005418544
2015	0.021385905	-0.013367257	-0.005338872	0.07914631
2016	-0.06912335	-0.005712325	0.084682584	0.046422825
2017	-0.029105217	0.080618643	0.04419498	0.082548357
2018	-0.066865139	0.041146429	0.076854205	0.339148935
2019	-0.2035666	0.04957588	0.218772765	0.004232625
2020	0.014742117	0.212277486	0.00410696	0.158393845
2021	-0.132127721	0.003613502	0.139362544	0.224389523

To illustrate that the model is considered an accurate representation of the studied phenomenon, it is necessary to investigate the hypothesis suggesting a significant impact on enhancing the appropriateness of accounting information quality.

Table (7): Correlation Matrix- the Kurdistan International Islamic Bank

Variables	(1)	(2)	(3)	(4)
(1) TACCI,t / Assets _{i,t}	1.000			
(2) CFO _{i,t-1} / Assets _{i,t}	0.075	1.000		
(3) CFO _{i,t} / Assets _{i,t}	-0.991*	-0.066	1.000	
(4) CFO _{i,t+1} / Assets _i	-0.146	0.505	0.154	1.000
*** p<0.01, ** p<0.05, * p<0.1				

Table (8): Correlation Matrix- the Islamic Iraq Bank

Variables	(1)	(2)	(3)	(4)
(1) TACCI,t / Assets _{i,t}	1.000			
(2) CFO _{i,t-1} / Assets _{i,t}	0.068	1.000		
(3) CFO _{i,t} / Assets _{i,t}	-0.891*	-0.069	1.000	
(4) CFO _{i,t+1} / Assets _i	-0.265	0.459	0.215	1.000
*** p<0.01, ** p<0.05, * p<0.1				

The regression aims to study the relationship between the quality of accruals and cash flow from operations. The quality of accruals is measured by the absolute match value from the modified Jones model. Cash flow from operations is divided by total assets to control for the size effect (Dechow et al., 1995). Cash flow from operations is divided by total assets to control for the size effect. The regression results indicate the following:

Table (9): Accrual quality- the Kurdistan International Islamic Bank

	(1)
CFO_{i,t-1} / Assets_{i,t}	-0.0151
	(0.0443)
CFO_{i,t} / Assets_{i,t}	-0.9942***
	(0.0385)
CFO_{i,t+1} / Assets_i	0.0229
	(0.0138)
Constant	0.0246***
	(0.0079)
Observations	16
Adjusted R²	0.983

Standard errors in parentheses

* p < 0.10, ** p < 0.05, *** p < 0.01

$$c_1 = -0.0151 \frac{CFO_{i,t-1}}{Assets_i} - 0.9942 \frac{CFO_{i,t}}{Assets_i} + 0.0229 \frac{CFO_{i,t+1}}{Assets_i} + 0.0246$$

C1= TACC_{i,t} / Assets_{i,t}

In Table (9) concerning accrual quality (quality of accounting information) within the operations of the Kurdistan International Islamic Bank, the net coefficient for cash flow from operations (CFO_{i,t} / Assets_{i,t}) is negative and significant at the 1% level, indicating that the current cash flow from operations has a negative relationship with the quality of accruals. This suggests that companies with high cash flow from operations tend to have lower accrual quality, which may reflect earnings management or low quality of accounting information (Francis et al., 2004).

In the regression analysis conducted, the focus was on evaluating the impact of operating cash flows (CFO) on the quality of accruals (quality of accounting information) within the context of financial data. The dependent variable representing accrual quality showed a coefficient of -0.9942,

proving significant at the 1% level. This aligns with findings in the literature by Ball and Shivakumar (2005) and Dechow et al. (1995), emphasizing the importance of accrual quality. The independent variables, particularly $CFO_{i,t} / Assets_{i,t}$, exhibited a strong negative effect (Francis et al., 2004). Simultaneously, $CFO_{i,t-1} / Assets_{i,t}$ showed a negative but statistically insignificant effect, while $CFO_{i,t+1} / Assets_{i,t}$ indicated a positive effect (Dechow & Dichev, 2002).

The regression has a high average R^2 of 0.983, indicating that the model explains 98.3% of the variance in accrual quality. Estimation errors are reported in parentheses below the coefficients.

The model's strength was evident through the high R-squared value of 0.983, indicating a high level of fit (Guay, 1999). Previous research (Graham, 1999; Jones, 1991; Doyle et al., 2007) in academic references points to the context of interpreting coefficients and understanding their effects within current literature. This detailed analysis provides a comprehensive exploration of regression results.

Table (10): Accrual quality- the Islamic Iraq Bank

	(1)
$CFO_{i,t-1} / Assets_{i,t}$	-0.0358
	(0.0368)
$CFO_{i,t} / Assets_{i,t}$	-0.7369**
	(0.0258)
$CFO_{i,t+1} / Assets_{i,t}$	0.0368*
	(0.0358)
Constant	0.0365**
	(0.0058)
Observations	16
Adjusted R^2	0.875

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

$$C_1 = -0.0358 \left(\frac{CFO_{i,t-1}}{Assets_{i,t}} \right) - 0.7369 \left(\frac{CFO_{i,t}}{Assets_{i,t}} \right) + 0.0368 \left(\frac{CFO_{i,t+1}}{Assets_{i,t}} \right) + 0.0365$$

$C_1 = TACC_{i,t} / Assets_{i,t}$

In Table (10) concerning accrual quality (quality of accounting information) within the operations of the Islamic Iraq Bank, the regression

analysis offers intricate insights into the relationship between various financial metrics .

The coefficient for the ratio of lagged cash flow from operations to assets $CFO_{i,t-1} / Assets_{i,t}$ is reported as -0.0358, indicating a non-significant impact on accrual quality. This suggests that the previous period's cash flow does not significantly affect the quality of accruals in the current period.

In contrast, the coefficient for the ratio of current cash flow from operations to assets $CFO_{i,t} / Assets_{i,t}$ stands at -0.7369, statistically significant at a level of $p < 0.05$. This significant negative relationship suggests that the current cash flow from operations plays a substantial role in influencing the quality of accruals.

Moreover, the coefficient for the ratio of future cash flow from operations to assets $CFO_{i,t+1} / Assets_{i,t}$ is 0.0368, showing statistical significance at $p < 0.10$. This indicates a positive relationship between the future cash flow from operations and accrual quality, although this relationship is not as strong as that observed with current cash flows.

With 16 observations, the model demonstrates a high explanatory power, as reflected by the Adjusted R-squared value of 0.875. This value suggests that approximately 87.5% of the variance in accrual quality within the Islamic Iraq Bank can be elucidated by the independent variables in this model .

Overall, these findings underscore the intricate dynamics between cash flow from operations, and accrual quality within the Islamic Iraq Bank.

Implications: The regression results bear significant implications for understanding the quality of entitlement and the cash flow from operations. Firstly, they suggest that the quality of entitlement is not solely influenced by the current cash flow from operations but is also impacted by past and future cash flows. This implies that Accrual quality captures the continuity and predictability of cash flow from operations, crucial aspects for assessing the bank. Secondly, they indicate that Accrual quality is negatively associated with the current cash flow from operations, potentially reflecting incentives or opportunities for earnings management or low accounting quality. This signifies that entitlement quality can be utilized as a proxy for relevance in financial reporting, essential considerations for investors and regulatory bodies.

The accounting information that ensures **reliability** should be comprehensive and neutral, without exaggeration, deficiency, or distortion. In this regard, the researcher will utilize data from the Kurdistan International Islamic Bank and the Iraqi Bank to measure the reliability characteristic using the Kim & Kross model (Kim & Kross, 1998). This will be elucidated in the following details:

Table (11): The data necessary to measure the reliability characteristic at Kurdistan International Islamic Bank for the years (2005-2021)

total assets of the previous year	Depreciation	Change in Tax	Change in net creditors	Change in current liabilities	Change in current assets	Change in net receivable	Year
60669999	0						2005
123701866	521227	55137	20462881	62467996	61323510	19401020	2006
128446487	663618	858706	-9510358	-358822	94747	-18380598	2007
252165648	1168032	1082504	277159	112659706	120721059	899692	2008
354987851	1249998	338874	437384	91489286	96564133	72310343	2009
490465142	1629259	-731438	6389432	81425859	132351927	-66422583	2010
600602245	1960799	2637253	207345	36104564	107023777	-4551390	2011
1031799376	3100569	1767321	7538246	247149776	425155442	8378999	2012
1077019849	2062285	409109	8495424	8854831	38982775	5184467	2013
1061321504	2172529	240708	-20588206	-53427995	-25766407	-10338270	2014
1022533002	2557673	819943	-6399448	-81164501	-47674346	9521450	2015
959325675	4640574	838902	210127	-113786795	-52041604	263215	2016
1062107860	3840112	-960921	10587788	61637010	102863256	-1134538	2017
1262959834	4286491	-6094762	-12612876	180530528	203753126	1138797	2018
1245661690	5788945	-906972	5166892	-3614245	-14778780	3344098	2019
1445018764	4371126	1585363	-2802807	188765285	203326676	1830635	2020
1416579794	4056119	-1018804	509577	-34494445	-26737455	1637650	2021

In thousand Iraqi dinars

Table (12): The data necessary to measure the reliability characteristic at Islamic Iraq Bank for the years (2005-2021)

total assets of the previous year	Depreciation	Change in Tax	Change in net creditors	Change in current liabilities	Change in current assets	Change in net receivable	Year
41314168	19911						2005
44393617	23360	-93119	109812	3387980	2878798	1831571	2006
45778628	81280	19729	-916042	1480985	1454912	11041	2007
52568725	101353	-19729	950449	8061691	3040828	4450271	2008
84845675	154354	112893	-457277	5104842	36105373	-1391214	2009
80272843	163440	-112893	-511270	-4673159	-5126191	-2245741	2010
310103679	166400	1000000	1191954	166902460	222246423	18868946	2011
373682873	221017	3266377	14390261	2772260	60020341	6335541	2012
455486699	447030	1408570	-3894420	25570769	82580794	-934889	2013
471442666	929868	-3758548	-8314055	-16174189	13680840	-533905	2014
478478052	1063362	-388394	-748384	-1013402	4415339	8702311	2015
447196700	1717886	299383	13794	-21076766	-31586544	-20620976	2016
469739636	2102377	-33366	599510	15302200	23511600	2437573	2017
504542790	1742508	-710457	838275	39364943	33347128	2446265	2018
782159287	2058142	1525071	11560943	262796559	262626437	39482315	2019
806091845	1690772	181304	1885542	967809	26455720	41071276	2020
916171473	998665	44265	1307504	121303204	97847042	-83241029	2021

In thousand Iraqi dinars

To illustrate that the model is considered an accurate representation of the studied phenomenon, it is necessary to examine the hypothesis suggesting a significant impact on enhancing the reliability characteristic of accounting information quality. It is illustrated by the following equation:

$$CFO_{i,t+1} = \beta_0 + \beta_1 CFO_{i,t} + \beta_2 Acc_{i,t} + U_{i,t+1}$$

Table (13): Correlation Matrix- Kurdistan International Islamic Bank and

Variables	(1)	(2)	(3)
(1) CFO+1	1.000		
(2) CFO	0.032	1.000	
(3) acc	-0.235	0.442	1.000
*** p<0.01, ** p<0.05, * p<0.1			

Table (14): Correlation Matrix- the Iraqi Bank

Variables	(1)	(2)	(3)
(1) CFO+1	1.000		
(2) CFO	0.053	1.000	
(3) acc	-0.365	0.598	1.000
*** p<0.01, ** p<0.05, * p<0.1			

The researcher studies the effect of the independent variables of the reliability measurement model, and can demonstrate the analysis of multiple regression results related to independent variables and their ability to interpret and predict the dependent variable. All elements of the regression equation are divided into the total assets of the previous year, in order to eliminate the effect of the size of the enterprise, and eliminate the problem of instability of random error variance. Through the following table:

Table (15): the future cash flow from operations- Kurdistan International Islamic Bank

	(1)
CFO - cash flow from operations	0.1538
	(0.1500)
Accruals	-0.0000
	(0.0000)
Constant	0.1719*
	(0.0854)
Observations	16
Adjusted R²	0.063

Standard errors in parentheses

* p < 0.10, ** p < 0.05, *** p < 0.01

The regression equation is:

$$\text{CFO}_{i,t+1}/\text{Assets}_{i,t} = 0.1538(\text{CFO}_{i,t}/\text{Assets}_{i,t}) - 0.0000 (\text{acc}_{i,t}/\text{Assets}_{i,t}) + 0.1719$$

Where $\text{CFO}_{i,t+1}$ represents the future cash flow operation, $\text{CFO}_{i,t}$ indicates the cash flow from operations, $\text{acc}_{i,t}$ represents accruals, and $\text{Assets}_{i,t}$ represents the total assets of company i in period t-1.

The regression results reveal the following:

- ❖ The coefficient CFO - cash flow from operations is positive but statistically insignificant, suggesting that cash flow from operations has an insignificant

effect on the future cash flow operation. This implies that current cash flow is not a requirement to generate future cash flow.

- ❖ The coefficient acc_i is zero and lacks statistical significance, indicating that accruals have no impact on the future cash flow operation.

The regression has a low adjusted R^2 0.063, indicating that the model explains only 6.3% of the variation in the future cash flow from operations.

Table (16): the future cash flow from operations- the Iraqi Bank

	(1)
CFO - cash flow from operations	0.2658
	(0.1780)
Accruals	-0.0035
	(0.0003)
Constant	0.1598*
	(0.0369)
Observations	16
Adjusted R^2	0.071

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The regression equation is:

$CFO_{i,t+1}/Assets_{i,t} = 0.1598 + 0.2658(CFO_{i,t}/Assets_{i,t}) - 0.0035(Acc_{i,t}/Assets_{i,t})$

The regression results indicate the following:

The coefficient for CFO is 0.2658, but it is not statistically significant at conventional levels ($p > 0.10$). This suggests that the cash flow from operations does not have a significant effect on the future cash flow from operations. The positive coefficient implies a positive association, but since it is not statistically significant, we cannot conclude that there is a meaningful relationship between CFO and the future cash flow operation.

The coefficient for accruals in the regression model is -0.0035, but it is not statistically significant at levels ($p > 0.10$). A non-significant coefficient for accruals suggests that in this particular analysis, there isn't enough evidence to conclude that there is a relationship between accruals and future cash flow from operations for the Iraqi Bank. It could imply that accruals may not be a significant determinant of future cash flow in this specific context or that the sample size or other factors may be influencing the outcome.

Overall, the model's adjusted R-squared is 0.071, indicating that the independent variables (CFO and accruals) explain approximately 7.1% of the variation in the dependent variable (the future cash flow operation). This suggests that other factors not included in the model may also influence the future cash flow operation.

8. Regression Analysis (Prove the hypothesis): When testing the research hypothesis concerning the impact of Credit risks on the quality of accounting information. The following equation can be utilized:

$$\text{QAI} = \beta_0 + \beta_1 (\text{Credit Risk}) + \varepsilon$$

In this equation:

- ❖ (QAI) is the dependent variable: representing the quality of accounting information.
- ❖ Credit Risk is the independent variable representing Credit risks faced by the bank.
- ❖ β_0 is the intercept term.
- ❖ β_1 is slope coefficient representing the change in (QAI) with a one-unit change in the independent variable.
- ❖ ε is the error term.

The strength and direction of the relationship between the study variables of the Kurdistan International Islamic Bank for Investment and Development in Erbil and the Islamic Iraqi Bank for Investment and Development is measured through the use of a regression model that shows the impact of credit risk as an independent variable in the bank's Accounting Information Quality (QAI). as a dependent variable through the use of accrual quality, which represents the characteristic of relevance, and the use of future cash flow from operations, which represents the characteristic of reliability.

Table (17): Accrual quality- the Kurdistan International Islamic Bank

	(1)
Credit Risks-	0.4289**
	(0.0535)
Constant	0.4426
	(0.4739)
Observations	11
R²	0.386

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table (18): Future operating cash flow- the Kurdistan International Islamic Bank

	(1)
Credit Risks-	0.2285*
	(0.0297)
Constant	0.4157
	(0.8033)
Observations	11
R²	0.132

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

In Table (17) & (19), the regression analysis indicates on the accrual quality of the Kurdistan International Islamic Bank & Islamic Iraq Bank. The results reveal a statistically significant relationship between credit risks and accrual quality, as indicated by the coefficient of 0.4289 & 0.3258 with a significance level of $p < 0.05$ (**) & $p < 0.05$ (**) respectively. This suggests that credit risks play a significant role in influencing the bank's accrual quality. The model explains around 38.6% & 65.8% of the variance in accrual quality, as denoted by the R-squared value of 0.386 & 0.658 respectively. This needs for considering other independent variables that help explain the change in the dependent variable.

Table (17) & (19) indicate that Credit risks have a significant and positive impact on Accrual quality, indicating that an increase in credit risks is associated with higher Accrual quality. This can be explained by the fact that credit risks reflect the allocation likelihood of financial loss resulting from a borrower's inability to repay a loan, which may incentivize the bank to enhance its lending standards, risk management, and disclosure practices. The positive and significant impact of credit risks on Accrual quality implies that the bank faces a trade-off between risk and quality. On one hand, high credit risks mean potentially higher financial returns but also a greater likelihood of loss and default. On the other hand, high credit risks also mean higher incentives to improve its product quality, potentially helping the bank attract and retain customers, investors, and regulatory entities. The bank must strike a balance between its risk appetite and quality objectives, adopting sound credit risk management policies such as credit assessment, evaluation, monitoring, and risk allocation to enhance its risk-return profile.

Table (19): Accrual quality- The Islamic Iraq Bank

	(1)
Credit Risks-	0.3258**
	(0.0358)
Constant	0.368
	(0.6589)
Observations	11
R²	0.658

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table (20): Future operating cash flow- The Islamic Iraq Bank

	(1)
Credit Risks-	0.3685**
	(0.0368)
Constant	0.5874
	(0.7058)
Observations	11
R²	0.235

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

In Table (18) & (20), the regression analysis indicates on the future operating cash flow of the Kurdistan International Islamic Bank & Islamic Iraq Bank. The results reveal a statistically significant relationship between credit risks and future operating cash flows, as indicated by the coefficient of 0.2285 & 0.3685 with a significance level of $p < 0.10$ (*) & $p < 0.05$ (**) respectively. This suggests that credit risks play a significant role in influencing the bank's future cash flows. The model explains around 13.2% & 23.5% of the variance in future operating cash flows, as denoted by the R-squared value of 0.132 & 0.235 respectively. This needs for considering other independent variables that help explain the change in the dependent variable.

9. Conclusion:

9-1. Research highlights the crucial role that Credit Risk Management plays in enhancing the quality of accounting information within the banking sector, particularly focusing on the Kurdistan International Islamic Bank for

Investment and Development (KIIB) and the Islamic Iraqi Bank (IIB). The study reveals a significant correlation between robust credit risk management practices and the improvement of financial reporting quality, emphasizing the relevance and reliability of accounting disclosures.

9-2. Moreover, the study highlights the challenges faced by the banking sector in Kurdistan and Iraq, where economic fluctuations and political instability can adversely affect in Credit Risk Assessment. Despite these challenges, there is a clear trend towards aligning with international standards, as evidenced by the adoption of enhanced credit risk management frameworks. This alignment not only aids in improving transparency and reliability in financial disclosures but also fosters market confidence and economic stability.

9-3. The research contributes valuable insights for regulatory bodies and financial institutions aiming to strengthen the quality of financial reporting. By prioritizing credit risk management, banks can mitigate the risks associated with financial information distortion and manipulation, thereby ensuring more accurate and reliable financial statements.

9-4. In conclusion, the study underscores the importance of credit risk auditing as a vital component in the pursuit of high-quality accounting information. The findings advocate for continued efforts towards enhancing risk management practices to better support the financial sector's integrity and growth. Future research should explore additional variables and contexts to further understand the multifaceted nature of quality of accounting information and the other factors that influence it.

References:

1. Acharya, V., Engle, R., & Richardson, M. (2012). Capital shortfall: A new approach to ranking and regulating systemic risks. *American Economic Review*, 102(3), 59-64.
2. Ahmed, E. (2021). Analysis the relationship between the extent of risk disclosure in financial reports and the company's risks and its reflection on earnings management - An applied study on Saudi Stock Market listed companies. *Scientific Journal of Commercial and Environmental Studies*, 12(3), 217-292.
3. Al-Tamimi, H. A. H., & Al-Mazrooei, F. M. (2007). Banks' risk management: A comparison study of UAE national and foreign banks. *The Journal of Risk Finance*, 8(4), 394-409.
4. Al-Khayyat, S., Sharofiddin, A., & Al-Shaghdari, F. (2024). Analyzing and Measuring the Impact of Operational Risks On Earning Management: An Applied Study On Islamic Banks Listed on the Iraq Stock Exchange for The Period (2011-2021). *al-Qanatr: International Journal of Islamic Studies*, 33(6), 196-211.

5. Altman, E. I., & Saunders, A. (1998). Credit risk measurement: Developments over the last 20 years. *Journal of Banking & Finance*, 21(11-12), 1721-1742.
6. Al-Naami, Ali Suleiman and Ahmed Brik Al-Amawi. (2015). The Role of Institutional Control Pillars in Activating Banking Risk Management "An Applied Study on Palestinian Banks in Gaza Governorate - Palestine". *Journal of the University of Palestine for Research and Studies*. Issue Eight, Part One.
7. Al-Hamidawi, Ali Hussein Mahawesh. (2016). The impact of changes in the conceptual framework of financial accounting on Iraqi accounting practices. Unpublished Master's Thesis, Wasit University, Iraq, p. 39.
8. Armouti, Ahmed Adnan. (2013). The Impact of Sustainability Accounting on Financial Reporting in Jordanian Public Shareholding Industrial Companies Listed on the Amman Stock Exchange. Master Thesis, Middle East University, Faculty of Commerce.
9. Ball, R., & Shivakumar, L. (2005). Earnings Quality in UK Private Firms: Comparative Loss Recognition Timeliness. *Journal of Accounting and Economics*, 39(1), 83-128.
10. Ball, R. (2006). International Financial Reporting Standards (IFRS): Pros and Cons for Investor (pp. 5-27). In *Accounting and Business Research International Accounting Policy Forum*. <https://doi.org/10.1080/00014788.2006> (Vol. 9730040).
11. Barth, M. E., Beaver, W. H., & Landsman, W. R. (2001). The relevance of the value relevance literature for financial accounting standard setting: Another view. *Journal of Accounting and Economics*, 31(1-3), 77-104.
12. Barth, M. E., Landsman, W. R., & Lang, M. H. (2008). International accounting standards and accounting quality. *Journal of accounting research*, 46(3), 467-498.
13. Basel Committee on Banking Supervision. (2011). Basel III: A global regulatory framework for more resilient banks and banking systems. Bank for International Settlements.
14. Beatty, A., & Liao, S. (2014). Financial accounting in the banking industry: A review of the empirical literature. *Journal of Accounting and Economics*, 58(2-3), 339-383.
15. Bholat, D., Lastra, R., Markose, S., Miglionico, A., & Sen, K. (2018). Non-performing loans at the dawn of IFRS 9: Regulatory and accounting treatment of asset quality. *Journal of Banking Regulation*, 19(1), 33-54.
16. Bushman, R. M., & Williams, C. D. (2015). Accounting discretion, loan loss provisioning, and discipline of banks' risk-taking. *Journal of Accounting and Economics*, 54(1), 1-18.
17. Beatty, A. L., Ke, B., & Petroni, K. R. (2002). Earnings management to avoid earnings declines across publicly and privately held banks. *The accounting review*, 77(3), 547-570.
18. Chen, A., & Gong, J. J. (2019). Accounting comparability, financial reporting quality, and the pricing of accruals. *Advances in accounting*, 45, 100415.
19. Cohen, J., Krishnamoorthy, G., & Wright, A. (2017). Enterprise risk management and the financial reporting process: The experiences of audit committee members, CFO s, and external auditors. *Contemporary Accounting Research*, 34(2), 1178-1209.

20. Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *Accounting review*, 193-225.
21. Dechow, P., & Dichev, I. (2002). The Quality of Accruals and Earnings: The Role of Accrual Estimation Errors. *The Accounting Review*, 77, 35-59.
22. DeFond, M. L., & Zhang, J. (2014). A review of archival auditing research. *Journal of Accounting and Economics*, 58(2-3), 275-326.
23. Doyle, J. T., Ge, W., & McVay, S. (2007). Accruals quality and internal control over financial reporting. *The accounting review*, 82(5), 1141-1170.
24. FASB (Financial Accounting Standards Board). (2018). Conceptual Framework for Financial Reporting. Retrieved from [FASB website] (<https://www.fasb.org>).
25. Francis, J., LaFond, R., Olsson, P. M., & Schipper, K. (2004). Costs of equity and earnings attributes. *The accounting review*, 79(4), 967-1010.
26. Graham, J. R. (1999). Do Personal Taxes Affect Corporate Financing Decisions? *Journal of Public Economics* 73.2, 147-185.
27. Guay, W. (1999). The Sensitivity of CEO Wealth to Equity Risk: An Analysis of the Magnitude and Determinants. *Journal of Financial Economics*.
28. Ivashina, V., & Scharfstein, D. (2010). Bank lending during the financial crisis of 2008. *Journal of Financial economics*, 97(3), 319-338.
29. Islamic Financial Services Board. (2005). Risk Management Guidelines for Institutions (other than Insurance Institutions) that are limited to the provision of Islamic financial services. *Takaful and Islamic Investment Funds*, pp. 11-44.
30. IASB (International Accounting Standards Board). (2018). Conceptual Framework for Financial Reporting. Retrieved from [IASB website] (<https://www.ifrs.org>).
31. Jones, J. (1991). Earnings Management During Import Relief Investigations. *Journal of Accounting Research*, 29(2), 193-228.
32. Jensen, M. C., & Meckling, W. H. (2019). Theory of the firm: Managerial behavior, agency costs and ownership structure. In *Corporate governance* (pp. 77-132). Gower.
33. Kim M, Kross W (1998) The impact of the 1989 change in bank capital standards on loan loss provisions and loan write-offs. *Journal of Accounting and Economics*, 25(1):69–99.
34. Khansalar, E. (2012). The reliability of accruals and the prediction of future cash flow. *International Journal of Business and Management*, 7(2), 45-57.
35. Kythreotis, A. (2014). Measurement of financial reporting quality based on IFRS conceptual framework's fundamental qualitative characteristics. Kythreotis, A. (2014). "Measurement of Financial Reporting Quality Based On Ifrs Conceptual Framework' S Fundamental Qualitative Characteristics," *European Journal of Accounting, Finance & Business*, 2(3), 4-29.
36. Kieso, Donald.E., Weygandt, Jerry. J., & Warfield, Terry. D. (2020). *Intermediate Accounting*, John & Sons Inc 4th edition, United States of America.
37. Laeven, L., & Majnoni, G. (2003). Loan loss provisioning and economic slowdowns: Too much, too late? *Journal of Financial Intermediation*, 12(2), 178-197.
38. Monjed, H. & Ibrahim, S. (2020). Risk disclosure, income smoothing and firm risk. *Journal of Applied Accounting Research*, 21(3), 517-533.

39. Mahmoud, Jamam. (2016). The Impact of Accounting Information Quality on Investment Decision Making, A Study of a Sample of Economic Institutions in the Wilayat of Constantine, Algeria. Journal of Baghdad College of Economic Sciences University. Issue 47.
40. Supervision, B. (2011). Basel committee on banking supervision. Principles for Sound Liquidity Risk Management and Supervision (September 2008).
41. Yaaqoub B., Ibtihaj Ismail and Jassim, Abdul Reda Latif. (2018). Testing the impact of switching to standards International Financial Reporting IFRS on the private banking sector in the Iraqi environment from the perspective of Qualitative and Values, Journal of Management and Economics D, Al-Mustansiriya University, Iraq, Issue (114,) P214.

Appendix

	Measuring credit risk in Kurdistan International Islamic Bank / amounts in thousands		
Credit Risk	Total Cash Credit	doubtful debts	year
0	0	0	2005
0	0	0	2006
0	0	1045000	2007
0.358260733	6079963	2178212	2008
0.27022358	11504318	3108738	2009
0.052981787	93217789	4938845	2010
0.131013914	61897525	8109437	2011
0.12897283	86106981	11105461	2012
0.086313987	162232455	14002930	2013
0.116886069	142798557	16691162	2014
0.0300861	101333671	3048735	2015
0.080903226	49262201	3985471	2016
0.533052536	15341077	8177600	2017
0.161409894	1812392	292538	2018
0.113385498	2572366	291669	2019
0.230600607	3198296	737529	2020
0.094228748	3806938	358723	2021

	Measuring credit risk in the Iraqi Islamic Bank / amounts in thousands		
Credit Risk	Total Cash Credit	doubtful debts	year
0.05472284	1744226	95449	2004
0.06809049	3819153	260048	2005
0.027696318	3828415	106033	2006

	Measuring credit risk in the Iraqi Islamic Bank / amounts in thousands		
Credit Risk	Total Cash Credit	doubtful debts	year
0.028861565	2375928	68573	2007
0.025951803	9275656	240720	2008
0.070420462	4924989	346820	2009
0.021891728	15842514	346820	2010
0.007385593	46958990	346820	2011
0.005572023	89734023	500000	2012
0.023432806	126369844	2961200	2013
0.050707977	128078074	6494580	2014
0.049276359	166970452	8227696	2015
0.066497402	150798313	10027696	2016
0.091487849	156409405	14309560	2017
0.133813445	142694451	19094436	2018
0.104967594	212872404	22344704	2019
0.164072962	162433784	26650992	2020
0.235819425	240685338	56758278	2021