Discuss developed Islamic insurance models by Jordan Islamic bank

Abdullah Ibrahim Nazal  
Associate Professor, Department of Islamic Banking  
Zarqa University, Jordan  
anazal@zu.edu.jo

Yahya Abdullah Khassawneh  
Associate Professor, Department of Islamic Banking  
Zarqa University, Jordan  
y_kasawneh@yahoo.com

Received: 28/11/2020  
Revised: 7/12/2020  
Accepted: 19/12/2020

DOI: https://doi.org/10.31559/GJEB2021.10.1.15
Discuss developed Islamic insurance models by Jordan Islamic bank

Abdullah Ibrahim Nazal  
Associate Professor, Department of Islamic, Zarqa University, Jordan  
anazal@zu.edu.jo

Yahya Abdullah Khassawneh  
Associate Professor, Department of Islamic, Zarqa University, Jordan  
y_kasawneh@yahoo.com

1. Introduction

Insurance companies are important for economic growth. Companies can deal with projects risks because Insurance services can reduce its expected loss. Government gets suitable income tax, also it depends on insurance services to reduce its projects risks and general budget expenses which cover social cases as elder case, unemployment cases, and illness cases.

There are many Islamic Insurance companies round the world. Islamic insurance is different than Traditional Insurance.

Al - Salih, (2014) founded needs to understand different between traditional insurance and Takaful. Kafeef, (1997) discussed the Fiqh scholar’s opinions and not accept Traditional Insurance because of loss and return gambling, but they accept Al - Ta Awuni Insurance type as Takaful helping relationship between customers. Al – Daghi, (2009) discussed Islamic insurance model to show different between Traditional Insurance and Islamic Insurance. He explained that by the case of risk happened as company loss returns. Salman, (2014) found that Islamic rules impact insurance services. It must avoid traditional insurance gambling, and loan interest investing.

By study the Islamic Insurance success, there were studies to understand its success. Sadeghi, (2010) founded difficult to judge the viability and credibility of Takaful according to theoretically and empirical studies. Swartz and Coetzer, (2010) found that interested of Islamic insurance is not enough to growth Takaful (Islamic insurance). It cannot meet the developing of insurance industry. Rahim and Amin, (2011) found that Islamic insurance acceptance is affected by attitude, subjective norm and amount of information. Al Humoudi, (2012) found the need to get insurance formula based upon financial reimbursement and huge capital to cover Takaful loss. Dikko, (2014) found different views of Islamic scholars on traditional insurance and there is Takaful.
Discuss developed Islamic insurance models by Jordan Islamic bank

Nazal & Khassawneh

Global Journal of Economics and Business, 10(1) (2021), 211-219

challenge of legal. Nazal, (2015) Suggestion Islamic Insurance Company Model based on donate relationship. Olorogun, (2018) found that Islamic insurance needs to invest in human resource and has to give return.

2. Ways of developing Islamic insurance models

There are two major ways to develop Islamic insurance models as follow:

First: to change Traditional Insurance Companies to Islamic Insurance Company. Al- Qudah & Al-Qudah, (2015) Discussed challenge of possibility to change traditional insurance to Islamic insurance and adjusted the Insurance Islamic rule (26) to obligate company shareholders to guarantee covering customer loss when it is more than the installments of customers’ baggage and when there is increasing of baggage than risk the company should distribute return.

The Islamic Insurance Company has to separate between equities and customers installments as artificial person, see figure 1:

![Figure 1: Rule of Islamic Insurance Company guarantee covering customer loss](Resource: by author)

On other hand, investing should be without interest of loan. The Investing should be by contracts as: selling, lease, and sharing. This model will obligate to buy income tax for customers' installments investing profit and shareholders equities' investing profit separately. Income tax is obligatory to any Insurance company in Jordan which equal 20%-25%.

The Insurance Shariha standard no: (26) showed the difference between traditional insurance company and Islamic insurance company. The Islamic insurance company divides the responsibility between shareholders and insurance documents holders as follow: AAOIFI, (2015)

1. The responsibility of insurance documents holders is grantee to pay the loss when it occurs, and holder the insurance documents, therefore, holders own the insurance documents return from holder's installments.
2. The responsibility of Islamic insurance company shareholders managed insurance documents and return documenting, calculating, and investing.

AAOIFI (2015) shows Shariha rules impact Islamic insurance company working environment; therefore, it has a model as follow:

1. Invest the equities capital based on Islamic ways as Musharakah or portfolio investing. Musharakah means sharing the capital investing of all shareholders. Shareholders will get all returns of Musharakah investing and to bear losses of the shareholders
2. Shareholders have authority to manage the rights of the document holder's services and to get return as salary. It gets return based on service of management not as investor.
3. Shareholders can invest surplus cash from the rights of documents holder's after reducing the possibility risks of the Islamic way of Modarabah. It gets part of return but it does not share in losses. Rights of documents holders will bear all losses.
4. The company increased liabilities and undistributed profit to meet needs of paying documents holders' compensations. Shareholders in this company have to give loan to the documents of the holders' in case the compensation after risk is to cover all documents holders' reserves.
Second: Developing Islamic insurance models by trying to meet customer’s insurance needs. It has to deal with Islamic rules. The simple Islamic rules of insurance depends on the rules that all customers’ installments are not profit but saving and covering risk by the customers installments is donate from their savings. Customers ask for Islamic Insurance model by Islamic rules as in figure 2:

![Figure (2): Expecting developing Islamic insurance by customers](image)

Resource: by the author

This is a expect model which has five aims to meet the customers' needs as follow:

1. To help customers to face the risk. It covers the loss after risk happens. It gives the customers feel of safety before the risk happens. The model gives Al-Ta Awuni relationship (a cooperation), and Takaful relationship as contract between customers to face risk to gather.
2. To help creditors (as complete paying Morabaha installments) when the risk of default happens. The model gives guarantees contract.
3. To help customers to get saving for the future. The model gives saving contract.
4. To help customers to get profit by investing. The model gives investing contracts.
5. Avoid Traditional Insurance because it is not applying Islamic rules, and it increases customers' costs when risk not happened in the limit period time of contract. Customers will loss sharing in the traditional insurance in case he defaults to complete paying insurance contracts because installments are Traditional Insurance Company returns not customers saving.

The customer’s aims are needs. It is showing chance of investing. Many Islamic insurance companies are established based on its Islamic insurance models as in Jordan Islamic bank experiences.

Jordan Islamic bank developed Reciprocal Insurance Fund Model (RIFM) and Islamic Insurance Company Model (IICM). It needs to be discussed to find welfare balance between it and customers’ aims.

3. Reciprocal Insurance Fund Model (RIFM)

It is in Islamic Jordan Bank as type of developed Islamic insurance service. It is box to collect all customers sharing in the risk of default because of death or patient disability or losing wealth. It is ruled by Jordan Center Bank as way to reduce the bank credit services risk. This credit services show the Islamic bank selling goods or lease building to be owned with installments payment.

Its mathematics model as follow:

**The RIFM box yearly = (All calculated installments since the box was established + part of net profit after tax because of investing) - (investing loss + pay compensation to cover customer risk + Islamic bank expenses as manager).**

The (RIFM) is managed by Jordan Islamic Bank based on the figure 3:

![Figure (3): The (RIFM) management in Jordan Islamic bank](image)

Resource: by author

The (RIFM) is a liability in the Islamic bank balance sheet but it does not own by customers.

The customers’ problem comes as result to increase their costs when risk is not happened. When there is Islamic bank clearance the (RIFM) box will be charity. Customers cannot get part of it after their insurance contract end. The Insurance installments are not savings for the customers and insurance installments are not Islamic bank profit.
(RIFM) box has increased by the time because buying risk is covering small part of installments. In 2018, the box faces insurance paid for the dissolution of contracts as new item, also, there were high decreasing in insurance premiums collected in 2018, also, the box faced dissolution of some contracts. Every year the Islamic bank shows changing of the (RIFM) box as in the table 1:

Table (1): changing of (RIFM) box in Jordan Islamic bank from 2013-2018

| Year – End balance | 2013-2018 | 2016-2018 | 2017-2018 | 2018-2019 | 2019-2020 |
|--------------------|-----------|-----------|-----------|-----------|-----------|
| Resource           | 36,323,694| 44,652,078| 53,590,986| 64,236,270| 73,711,297|
| Add: fund accounts profit during the year | 1,124,898 | 1,249,397 | 1,675,081 | 1,535,834 | 1,981,015 |
| Add: insurance premiums collected during the year | 10,915,751 | 13,803,945 | 17,807,692 | 17,995,660 | 14,806,862 |
| Add: reclaimed from previous years losses | - | - | - | 16,771 | 42,614 |
| Less: insurance premiums paid to Islamic Insurance Company during the year | (1,922,214) | (2,480,163) | (3,287,685) | (3,679,520) | (4,208,919) |
| Less: payment on the account of tax | - | (560,366) | (916,590) | (938,351) | (709,438) |
| Less: Fund income tax for the year | (1,769,304) | (2,669,289) | (3,090,203) | (4,211,637) | (4,180,404) |
| Less: Fund Committee members remunerations | (16,000) | (16,000) | (16,000) | (16,000) | (16,000) |
| Less: compensation paid during the year | - | - | (1,740) | (1,740) | (1,740) |
| Offers: Insurance paid for the dissolution of contracts | - | - | - | - | - |
| Less: amortized losses during the year | (4,747) | (388,616) | (725,271) | (325,990) | (538,162) |
| Year – End balance | 44,652,078 | 53,590,986 | 64,236,270 | 73,711,297 | 80,887,125 |
| Resources: Jordan Islamic Bank Annual report, (2014), (2016), and (2018) |

Discuss the IRFM table changing

IRFM box is not personal owning by Islamic bank or customers. There are three contracts effect the box calculating as follow:
1. Donate sharing contract to pay compensation after risk happened and cover Islamic bank risks. Compensations are just small part of insurance premiums paid to Islamic Insurance Company during the year.
2. Work and managing contract by Islamic bank to get expenses return.
3. Investing part of the IRFM box contract by Islamic bank to get profit that divided between the box and Islamic bank. The box increases by fund accounts profit during the year but income tax is applied every year to
reduce the box. Income tax is more than this fund. This comes as result to investing part from all the returns that was shown in year- beginning balance.

4. The box owning has independence artificial person, it is not own by the Islamic bank or the customers. Government, Islamic bank and customers get advantages. The result of changing in the box shows that risk compensations are small part of the box. The customers ask for balance between welfares. Customers ask question: why they do not get back their part of insurance premiums when the donate funds meet the risks compensation and managing expenses?

Discuss the benefit of the (RIFM) model

It covers risks after the customers get service from the bank. It covers all customers default risk. The box responsible to cover all customer default in case of risk happened as death risk but it not gives saving service to customers. The bank avoids default risks.

4. Islamic Insurance Company Model (IICM)

This type has been developed in Jordan after the Jordan Islamic bank tried to avoid dealing with the traditional insurance companies. It established by other shareholders the Islamic Insurance Company. It separates equities accounting and insurance holders' documents which are the customers. Its model is shown in figure (4) and (5):

**Figure (4):** The Islamic Insurance Company Model (IICM) accounting

**Resource:** by author based on Islamic Insurance company annual report, (2017), Pp11

**Figure (5):** The (IICM) customers accounting calculated in 2017

**Resource:** by author based on Islamic Insurance company annual report. (2017). Pp12, 113, and 66.
Calculated of customers Insurance instalments surplus has factors as in figure (2). These factors reduce the surplus except investing profit. Division of surplus has two parts. First part will be transfer to be added for the next year as artificial person. The second part will be distributed back to customers as personal saving.

In 2017, the all-insurance instalments were (23,475,644) but the distributed of surplus for customers was just (220,388). This comes as result to the reserves which increased than (13) million and paying compensation net were about (12) millions.

The part of surplus for every customer is calculated based on the following way:

\[ \text{(All customer instalments yearly / all customers' instalments yearly)} \times \text{The surplus that will be distributed by the company policy} \]

### Analysis Finance of the Islamic insurance company in Jordan

This model impacts the Islamic insurance company financial tables. There is division between shareholders and rights of documents holders. Rights of documents holders are shown in liabilities as divided liabilities, also it has different income statement than shareholders income statement, see the table 2:

| Table (2): Islamic Insurance Company finance data |
|-----------------------------------------------|
| **Balance sheet:**                           |
| Assets                                        | 39.9 | 37.8 | 37.2 | 33.6 | 30.3 |
| Liabilities                                   | 18   | 18.2 | 18.6 | 14.99| 12.9 |
| Liabilities/Assets                            | 0.45 | 0.48 | 0.49 | 0.44 | 0.42 |
| Rights of Document holders                    | 1.22 | 1.1  | 0.97 | 1    | 0.5  |
| Equities                                      | 20.68| 18.47| 17.53| 17.5 | 16.8 |
| **Statement of the Cash Flows:**              |
| Dividends distributed to shareholders         | 0    | 0.96 | 0.9  | 0.6  | 0.6  |
| Distributed Insurance surplus to insurance documents holders | 0.32 | 0.26 | 0.36 | 0.29 | 0    |
| Other distributed Insurance surplus for Charity | 0.07 | 0.12 | 0.23 | 0    | 0    |
| **Income statement:**                         |
| 1. Income statement of the Shareholders       |
| Shareholders' return                          | 6.0  | 5.67 | 5.24 | 4.6  | 3.8  |
| Shareholders' profit before tax               | 2.59 | 2.42 | 2.35 | 1.65 | 1.28 |
| Shareholders' tax                             | 0.589| 0.565| 0.568| 0.57 | 0.27 |
| 2. Income statement of the insurance documents holders |
| Insurance documents holders' returns          | 17.77| 16.9 | 16.2 | 15   | 13.8 |
| Insurance documents holders' surplus (return before tax) | 0.724| 0.546| 0.577| 0.421| 0.77 |
| Tax of the insurance documents holders' surplus | 0.052| 0.126| 0.044| 0.11 | 0.22 |

**Resources:** by authors based on Islamic Insurance Company annual reports 2014 – 2017

Islamic insurance company has flexible return of the insurance documents holders' management. Percentage calculating is increased by documents' increase, also percentage may be increased to meet the company needs, see table 3:

| Table (3): Flexibility Islamic Insurance Company return from insurance documents holders based on the changed percentage yearly |
|-----------------------------------------------------------------------------------------------------------------------------|
| **Year** | 2014 | 2015 | 2016 | 2017 |
|---------------------------------------------------------------|--------|--------|--------|--------|
| The company returns based on efforts’ return which is calculated as follow: All holder’s insurance documents’ × the changed percentage yearly | 19%    | 20%    | 22%    | 30%    |
| The company returns based on Modaraba sharing in investing return is calculated as follow: the changed percentage yearly × All holders insurance documents’ investing returns | 25%    | 25%    | 25%    | 25%    |

**Resources:** by authors based on Islamic Insurance Company annual reports 2014 – 2017
Analysis Customers Complain

The results of the Islamic insurance company managing were faced by complain as follow:

1. The insurance documents holders ask to get their surplus after their contracts end. They depend on the Islamic rule of owning the surplus every year because documents are yearly.
2. They are paying income tax by calculation:
   
   \[
   \text{1- Insurance documents holders' surplus (return before tax)} = (\text{All insurance documents holders - reinsurance and all costs + investing returns})
   \]
   
   \[
   \text{2- Tax of the insurance documents holders' surplus} = \text{yearly tax percentage \times Insurance documents holders' surplus}
   \]

The insurance documents holders find difference between all insurance documents holders and surplus of the insurance documents holders is high, see table (4):

| Year   | 2014 | 2015 | 2016 | 2017 |
|--------|------|------|------|------|
| All insurance documents holders | 21.4 | 22.9 | 23  | 23.47 |
| Insurance documents holders' surplus (return before tax) | 0.724 | 0.546 | 0.577 | 0.421 |
| Tax of the insurance documents holders' surplus | 0.115 | 0.044 | 0.126 | 0.052 |
| Surplus of the insurance documents holders yearly | 0.599 | 0.502 | 0.451 | 0.369 |

Resources: by authors based on Islamic Insurance Company annual reports 2014 – 2017

Table (4) shows the big difference between all insurance documents holders and surplus of the insurance documents holders yearly. The difference comes as result to managing cost and compensations.

Insurance Islamic company gives insurance documents holders’ part of their surplus but it keeps other part for the next year, see table (5):

| Year   | 2014 | 2015 | 2016 | 2017 |
|--------|------|------|------|------|
| Distributed Insurance surplus to insurance documents holders | 0.29 | 0.36 | 0.26 | 0.32 |

Resources: by authors based on Islamic Insurance Company annual reports 2014 – 2017

Years from 2014 - 2017 were showed surpluses. The company did not give insurance documents holders loan to cover their needs, therefore, it distributed the part of the insurance documents holders' surplus.

Discuss the (IICM)

This model tries to solve problem by give the customer part of insurance surplus as way to promote Islamic insurance but it not solves the customer problem as expecting because of the following reasons:

1. The company builds reserves from the customers’ installment as artificial person in the company. The reserves are high part of customers’ installments.
2. The company policy distributes small part of insurance surplus yearly.
3. The undistributed insurance surplus is artificial person not owning by customer or equity. It is liability.

Discuss the benefit of the (IICM) model

It covers customer's risks even the customer not get service from Jordan Islamic bank. It covers the customer's risk partly based on the Insurance companies' law not as in the (RIFM). The Islamic Insurance Company gets return from managing and investing customers’ installments. It is way to reduce risk not avoid it.

5. Results of Comparing between (IICM) and (RIFM) Models

Based on the discussing of the models, the comparing shows the results as in table 6:
Table (6): Results of comparing between (IICM) model and (RIFM) model

| Classified Contract | Independence Artificial Person | Independence Artificial Person |
|---------------------|--------------------------------|--------------------------------|
| Risk types          | Covering the Jordan Islamic bank risk of customers defaults | Covering types of insurance services as any Insurance company |
| Customers right     | Covering his default in the limited cases as in death. | • Covering his risk in the limited cases based on the insurance type  
                      |                                                    | • Get part of insurance surplus yearly. |
| Covering risk       | Covering whole risk | Covering risk partly based on the Insurance company’s law |
| Ways of managing    | • Investing part of insurance installment  
                      | • Paying conversation after risk happened  
                      | • Limit compensation of risk by customers defaults | • Investing part of insurance installment  
                      | • Paying conversation after risk happened  
                      | • Limit compensation of risk partly  
                      | • Make reserves  
                      | • Reinsurance | • Get managing and working returns  
                      | • Get part of investing customers installments  
                      | • Reputation to increase dealing by Islamic services | • Get part of investing customers installments  
                      | • Reputation to increase dealing by Islamic services |
| Customers benefits  | Cover whole risk | • Cover risk partly  
                      |                                                    | • Get part of surplus insurance |
| The Jordan Islamic Bank benefits | • Transfer its customer risk of default  
                      | • Get managing and working returns  
                      | • Get part of investing customers installments  
                      | • Reputation to increase dealing by Islamic services | • Get managing and working returns  
                      | • Get part of investing customers installments  
                      | • Reputation to increase dealing by Islamic services |

Resource: by author

6. Conclusion

Jordan Islamic bank developed and applying two Islamic Insurance models (RIFM) is not owned by customers neither the Jordan Islamic bank. It is an artificial person. (IICM) has small part of insurance surplus to be as customers saving but the other part is artificial person. It meets the Jordan Islamic bank returns and managing risk by avoids or reduces. Developing Islamic Insurance model is directed to meet the Insurance Company as profitability model but the benefit is meeting Insurance company aims more than the customers' aims.

Developing Islamic insurance models is directed to meet the establisher aims which impacts the result of applied the model practically. It is directed to meet profitability organization with Islamic rules. It is trying to get returns by two ways:

1. To get managing, and working returns by added contract of managing and working by return. It calculated as part of Insurance services expenses.
2. To get part of profit by investing part of collecting insurance installments.

Also, it is directed to meet covering the organization customer's defaults risk. By the time some organizations developed the model to meet its organization reducing of risk classification. It gets part from customers' installments to get reserves or provisions.

Recommendation for Future Research

Based on the results there is need to develop new model to reduce customers costs than (RIFM) and (IICM) in order to increase distributed insurance surplus.

References

[1] Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI). (2015). Insurance Shariha Standards, retrieved from: https://www.kantakji.com/media/165382
[2] Al Daghi, A. (2009). "Al - Ta Awuni Insurance concept, rules, and challenges". Qatar, p90-92, Retrieved from: https://kantakji.com/media/1011/001.pdf
[3] Dikko, M. (2014). "Analysis of issues in Takaful (Islamic insurance)". European journal of business and management, 6(15): 4, Retrieved from: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.734.946&rep=rep1&type=pdf
[4] Al Humoudi, Y. (2012). “Islamic insurance Takaful and its applications in Saudi Arabia”. PhD thesis, law school, Brunel University, P225, Retrieved from: https://bura.brunel.ac.uk/bitstream/2438/7449/1/FulTextThesis.pdf
[5] Islamic Insurance Company. (2014). “Islamic insurance company annual report”. Jordan, pp 40-73, retrieved from: http://www.islamicinsurance.jo/sites/default/files/ltqyr_lsnwy_2014.pdf
Discuss developed Islamic insurance models by Jordan Islamic bank

Nazal & Khassawneh

[6] Islamic Insurance Company. (2015). “Islamic insurance company annual report”. Jordan, pp 35-70, retrieved from: http://www.islamicinsurance.jo/sites/default/files/IIB_AnnualReport_2015.pdf

[7] Islamic Insurance Company. (2016). “Islamic insurance company annual report”. Jordan, pp, 42-70, retrieved from: http://www.islamicinsurance.jo/sites/default/files/IIB_AnnualReport_2016.pdf

[8] Islamic Insurance Company. (2017). “Islamic insurance company annual report”. Jordan, pp 43, 68, and 57, retrieved from: http://www.islamicinsurance.jo/sites/default/files/IIB_AnnualReport_2017.pdf

[9] Jordan Islamic Bank. (2014). "Jordan Islamic Bank annual report". Jordan, P124, retrieved from: https://www.jordanislamicbank.com/sites/default/files/anuual2014(1).pdf

[10] Jordan Islamic Bank. (2016). "Jordan Islamic Bank annual report". Jordan, pp 137, 83, 94, 122, 126, 161, 165, retrieved from: https://www.jordanislamicbank.com/sites/default/files/IB_AnnualReport_2016.pdf 31/11/2017

[11] Jordan Islamic Bank. (2018). "Jordan Islamic Bank annual report". Jordan, P154, retrieved from: https://www.jordanislamicbank.com/sites/default/files/IIB_AnnualReport_2019_Arabic%20%20low.pdf

[12] Nazal, A. (2015). “Suggestion of Islamic Insurance Company Model”, Asian Economic and Financial Review, 5 (2): 320-325. https://doi.org/10.18488/journal.aefr/2015.5.2/102.2.320.325.

[13] Olorogun, L. (2018). "Optimal general Islamic insurance rating model a focus group validation”, Academy of accounting and financial studies journal, 22 (special issue), retrieved from: https://www.abacademies.org/articles/Optimal-General-Islamic-Insurance-Rating-Model-A-Focus-Group-Validation-1528-2635-22-SI-153.pdf

[14] Al Qudah, M. & al-Qudah, A. (2015). "Transformation Commercial insurance companies to Islamic insurance companies”, Islamic and law science studies, 42 (3): 1041-1052. https://doi.org/10.12816/0028548.

[15] Rahim, F., & Amin, H. (2011). "Determinants of Islamic Insurance acceptance: An empirical analysis", international journal of business and society, 12 (2), p11, Retrieved from: http://www.ijbs.unimas.my/repository/pdf/Vol12No2(paper3).pdf

[16] Sadeghi, M. (2010). “The evaluation of Islamic insurance – Takaful: a literature survey”, Insurance Markets and Companies Analysis and Actuarial Computations, 1 (2): 102, 105,106, retrieved from: https://businessperspectives.org/images/pdf/applications/publishing/templates/article/assets/3512/IMC-2010-2_Sadeghi.pdf

[17] Al Salih, A. (2014). "conventional general insurance: analysis Muslim consumer’s perceptions and choices in UK and Saudi Arabia”. PhD thesis, school of management, university of London, p296, retrieved from: https://pure.royalholloway.ac.uk/portal/files/19505622/2014AlsalihApbd.pdf

[18] Salman, S. (2014). "Contemporary issue in Takaful (Islamic Insurance)”. Asian social science, 10 (22): 210. https://doi.org/10.5539/ass.v10n22p210.

[19] Swartz, N., & Coetzer, P. (2010). “Takaful: an Islamic insurance instrument”, journal of development and agriculture economics, 2 (10): 333, retrieved from: http://academic.journals.org/journal/IDAE/article-full-text-pdf/C6DC8E01948