CLASSIFICATION OF TAKAFUL CONTRACTS

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The purpose of this paper are to sharing information and give knowledge to actuaries that may wish to take into account when providing professional services in accordance with IFRS reporting for shariah insurance company. To satisfy the requirements of IFRS relevant to the professional service to be provided by the actuary, the actuary may wish to determine the classification of contracts, separation of contracts and components, whether contracts have embedded derivative and discretionary participation features. These concepts refers to standard and regulatory insurance shariah (takaful) in Indonesia.

Takaful contract is an insurance contract base on islamic models of financing concepts where participants pay contributions to takaful company. The takaful company to act as an operator to manage risk and invest the contribution fund. Takaful is derived from an Arabic word that means joint guarantee, the group of participants agree among themselves to support one another jointly for the losses arising from specified risks.

The premiums (contributions) paid by the participants are credited into the pooling fund, which is then invested and the profits generated are paid back to the participants. Takaful company may have three pooling fund namely takaful funds, investment funds and corporate funds. Regulatory shariah insurance in Indonesia requirement unbundling contracts so it will be divided into three pooling funds of contracts. The three pooling fund are

1. Takaful fund to address liabilities of takaful contracts
2. Investment fund to address liabilities of investment contracts
3. Corporate fund to address liabilities of service contracts and equities of shareholders

Takaful contracts in Indonesia are separated by the three financial statements so that the actuary will easy to measures liabilities for each contract. When the premiums paid by the participants, the takaful operator must separates of contribution received and credited into right account.
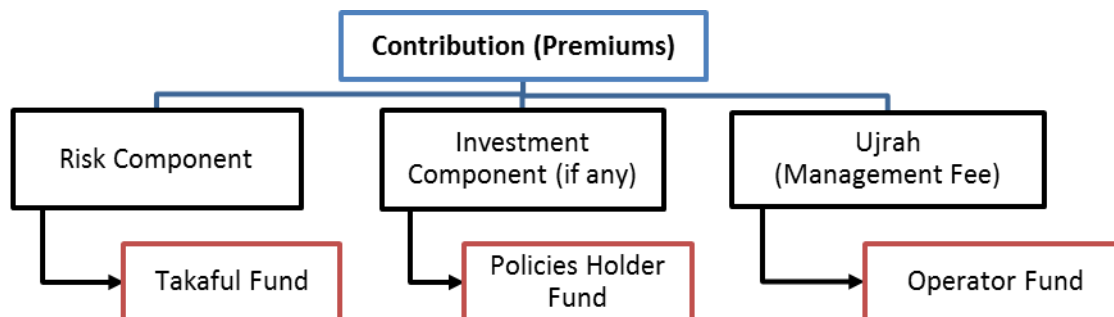
The contributors payments are divided into risk component, investment component (for life and if any) and ujrah component. Ujrah is derived from an Arabic word that means fee. Ujrah or management fee is used to cover commission, acquisition cost, operational cost, establishment cost and other miscellaneous expenses.

A. TAKAFUL CONTRACTS

Takaful contracts always have significant insurance risk and takaful fund as an accumulation of contribution will allocated to pay claims only. This will form the contract of insurance assets and liabilities of the company. Asset consists of pooling funds is calculated based on the accumulated fund and asset valuation based on existing accounting standards. As for the liability actuary, calculate the minimum actuarial liability based on the following rule;

Liabilities of Takaful Contracts = Max (Takaful Fund; Actuarial liabilities)

Actuarial liabilities = UPR + Premium Reserve + Claim Reserve

Takaful Asset = Takaful Fund + Asset Qardhul-hasan

When operators has defisit underwriting, the assets of takaful fund less than liabilities takaful contracts. In this condition takaful operator must provide qardh al-hasan into takaful fund for fulfill the condition of assets equal to liabilities. Qardhu-hasan is means loan without guarantee and interest. The loan was granted with no time restrictions term and no fee or expenses. Amount of qardhul-hasan is calculated as

Qardhul-hasan = Max(0, Actuarial Liabilities – Takaful Fund)

A.1. Tabarru Contract

The most popular model of takaful contract is tabarru. Tabarru means a donation, charity or gift which cannot be taken back. In Takaful, a percentage of the participants contribution will be considered as tabarru and thus cannot be taken back, as it is the principle of the joint guarantee to help other participants. Once a participant joins to the Takaful policy, a portion of his contribution is allocated through the tabarru principle to help all participants from unexpected but defined risks. Tabarru contract does not have embedded derivative or discretionary participation feature.

Actuarial liabilities = UPR + Tabarru Reserve + Claim Reserve

Tabarru reserve is present value of future claim minus present value of future tabarru contribution. Tabarru reserve is not include present value of future cost and expenses (expenses reserve). The expenses reserve belonging to the operation fund as services contract.

Example 1 : The takaful company have takaful fund at beginning 2005 is $10.000 and no qardhul-hasan, receive tabarru contribution $3.000, return on investment $500 and pay claim $2.000. If Actuarial liabilities at 31 Des is $12.500, determine the qardhul-hasan at 31 Dec 2005.

1. Takaful Fund at 1 Jan 2005 $10.000
2. Tabarru Contribution $3.000
3. Return of investment $500
4. Claim Paid   ($ 2.000)
   Takaful Fund at 31 Dec 2005 $11.500

Qardhul-hasan = Max(0, $12.500 – $11.500) = $1.000

A.2. Mudarabah Contract

Mudarabah means profit sharing, a special kind of partnership where policies holders gives money to the takaful operators to manage risk on behalf all policies holders. If any underwriting surplus the policies holders and takaful operator could have profit sharing. There are some opinions that do not agree takaful operator taking underwriting surplus from takaful contributions. In the real situation for example the big companies have responsibility to manage large group member of health insurance or personal accident contract. They want takaful operator to manage risk on behalf them. Mudarabah model is alternative for the big company and takaful operator have mudarabah contract. In this case takaful operator reasonable have surplus underwriting on mudarabah contract with the large participant form one policies holder.

Mudarabah models are possible have embedded derivative (ED) or discretionary participation feature (PDF) on part of risk. Actuarial liabilities for mudarabah as follow this equation:

Actuarial liabilities = UPR + Mudarabah Reserve + Claim Reserve + ED Reserve + PDF Reserve

If any policies holders has difference scheme of embedded derivative then takaful operator must separate embedded derivative cash flow for the policies holders. For example there are five policies holders, the contracts gives profits sharing from takaful fund base on experience ratio claims per policy. Takaful operator must provide separate cash flows for each policies holder and measure liabilities per each policy.

Example 2 : The takaful company have takaful fund at beginning 2006 is $11.500 and qardhul-hasan $1.000, receive mudarabah contribution $3.000, return on investment $800 and pay claim $1.000. If Actuarial liabilities at 31 Des is $15.000, determine the qardhul-hasan at 31 Dec 2006.

1. Takaful Fund at 1 Jan 2006 $11.500
2. Mudarabah Contribution $3.000
3. Return of investment $1.000
4. Claim Paid   ($ 1.000)
     Takaful Fund at 31 Dec 2006 $14.500

Qardhul-hasan = Max(0, $15.000 – $14.500) = $500 and Payback Qardhul-hasan = $1.000 - $500 = $500. Both Policies holders and takaful operator could not have profit sharing until qardhul-hasan was zero.

A.3. Kafalah Contract

Kafalah generally means a guarantee. It is a contractual guarantee given by the guarantor to assume the responsibilities and obligations of the party being guaranteed on any claims. This principle is also applied in specific guarantees the takaful operator act as guarantor and assumes the liability of the policy holder when the policy holder fails to discharge his obligation, then takaful operator take over responsibilities to policies holders obligation.

Kafalah was more devoted to general insurance products such as third party liabilities or professional indemnity. Actuarial liabilities for kafalah as follow:

Actuarial liabilities = UPR + Kafalah Reserve

Example 3 : The takaful company have takaful fund at beginning 2007 is $14.500 and qardhul-hasan $500, receive kafalah contribution $3.000, return on investment $1.200 and pay claim $1.000. If Actuarial liabilities at 31 Des is $17.500, determine the qardhul-hasan at 31 Dec 2007.

1. Takaful Fund at 1 Jan 2007 $14.500
2. Kafalah Contribution $3.000
3. Return of investment $1.200
4. Claim Paid   ($ 1.000)
     Takaful Fund at 31 Dec 2007 $17.700

Qardhul-hasan = Max(0, $17.500 – $17.700) = $0 and Payback Qardhul-hasan = $500 - $0 = $500

A.4. Hawalah Contract

Hawalah means shifting a thing from one place to another. Technically, as a term of law, hawalah means the shifting or assignment of debt from the liability of original debtor to the liability of another person. Hawalah operates to release the original debtor from the debt. Hawalah model was suitable for cover life annuity contracts in which policy holder (employer) has the obligation to pay the annuity to the participant (employee). The policy holder (employer) was transferred to the takaful operator and paid

contribution. The operator receives the obligation to pay the annuity to the participant (employee). Actuarial liabilities for hawalah as follow:

Actuarial liabilities = Hawalah Reserve

Example 4 : The takaful company have takaful fund at beginning 2007 is $14.500 and Qardhul-hasan $500, receive Hawalah contribution $3.000, return on investment $1.000 and pay claim $1.800. If Actuarial liabilities at 31 Des is $17.500, determine the qardhul-hasan at 31 Dec 2007.

1. Takaful Fund at 1 Jan 2007 $14.500
2. Hawalah Contribution $3.000
3. Return of investment $1.000
4. <u>Claim Paid</u>   <u>($ 1.800)</u>
   Takaful Fund at 31 Dec 2007 $16.700

Qardhul-hasan = Max(0, $17.500 – $16.700) = $800 and New Qardhul-hasan = $800 - $500 = $300

B. INVESTMENT CONTRACTS

The investment contract is a formal term to describe non-insurance financial instruments. The investment contract can contain a large variety of contract, including loans, saving instruments, or liquid accounts. The takaful operator manages investment of policies holders fund on behalf of policies holders. The most frequently used models at the time of preparing this document are the mudarabah, wakalah and wakalah-mudarabah (hybrid) contracts.

Liabilitas of policies holder = Actuarial liabilities

Actuarial liabilities = Accumulated Fund + ED Reserve + PDF Reserve

The asset of policies holder fund is total pooling fund or accumulated fund plus asset of qardhul hasan.

Asset = Accumulated Fund + Asset of Qardhul-hasan

Then

Qardhul-hasan = ED Reserve + PDF Reserve

The investment contracts models are possible have embedded derivative (ED) or discretionary participation feature (DPF) on part of risk. Its mean in the investment contract which have ED or DPF are have actuarial liabilities for future investment risk.

B.1. Wakalah Contract

Wakalah means agent, the takaful operator is only manage and invested fund. Takaful operator act pure operator only. The wakalah concept is essentially an agent-principal relationship, where the takaful operator acts as an agent on behalf of the participants and earns a fee for services rendered. The fee can be a fixed amount or based on an agreed ratio of the investment funds. Wakalah as an agent and agent can't guarantee of investment return then wakalah contract don't have embedded derivative (ED) or discretionary participation feature (DPF), so actuarial liabilities equal to zero. The investment contract base on wakalah model don't have qardhul-hasan in every case.

Actuarial liabilities = Accumulated Fund

thus

Liabilities of Investment Contract = Investment Asset

Wakalah model is very conservative model, the policies holder sometimes can not have optimal investment return.

Example 5 : The takaful company have wakalah fund at beginning 2005 is $10.000 and no qardhul-hasan, receive investment contribution $3.000, return on investment $800, wakalah fee 2% of wakalah fund and pay withdrawal $2.000. If Actuarial liabilities at 31 Des $12.500, determine the qardhul-hasan at 31 Dec 2005.

1. Wakalah Fund at 1 Jan 2005 $10.000
2. Investment Contribution $3.000
3. Wakalah fee   ($260)
4. Return of investment $800
5. Withdrawal   ($2.000)
   Takaful Fund at 31 Dec 2005 $11.540

Liabilities of policies holder on investement contract = $11.500   then qardhul-hasan = $0

B.2. Mudarabah Contract

Mudarabah is a special kind of partnership where one partner gives money to another. The takaful operator manages the investment activities on behalf of policies holder. In any case mudarabah has loss sharing then in this case the investment contract can have ED and DPF. For example the takaful operators give promises the accumulated funds never less than total contribution was paid. The difference of mudarabah and wakalah is wakalah did not have any risk on investment activity but the mudarabah contract could have the investment risk.

Actuarial liabilities = Accumulated Funds + ED Reserve + DPF Reserve

Mudarabah Asset = Accumulated Funds + Qardhul-hasan

thus

Qardhul-hasan = ED Reserve + DPF Reserve

Nisbah is percentage of profit sharing for policies holders. Sometime the nisbah is related to investment return for example as follow

Investment Return	Nisbah	Operator
0% to 5%	90%	10%
+5% to 10%	80%	20%
>10%	70%	30%

Example 6 : The takaful company have takaful fund at beginning 2005 is $10.000 and no qardhul-hasan, receive investment contribution $3.000, return on investment $500 with nisbah 70% and pay withdrawal $2.000. If ED and DPF reserve at 31 Des is $500, determine the qardhul-hasan at 31 Dec 2005.

1. Takaful Fund at 1 Jan 2005 $10.000
2. Tabarru Contribution $3.000
3. Return of investment $500
4. Profit sharing of operator 30%   ($150)
5. Withdrawal   ($ 2.000)
   Takaful Fund at 31 Dec 2005 $11.350

Liabilities of investment contract = $11.350 + $500 = $11.850

Qardhul-hasan = Max(0, $11.850 – $11.350) = $500

B.3. Wakalah-Mudarabah (hybrid) Contract

Wakalah-Mudarabah is a hybrid model. The takaful operator manages the investment activities on behalf of policies holder and take a investment risk. In this model, the operator can have both wakalah fee and profit sharing. Insurance regulator in Indonesia did not allow this model but not in Malaysia. This model have same valuation as Mudarabah model.

Actuarial liabilities = Accumulated Fund + ED Reserve + DPF Reserve

Mudarabah Asset = Accumulated Fund + Qardhul-hasan

thus

Qardhul-hasan = ED Reserve + DPF Reserve

Example 7 : The takaful company have takaful fund at beginning 2005 is $10.000 and no qardhul-hasan, receive investment contribution $3.000, return on investment $500, nisbah of operator is 30%, wakalah fee 1% of wakalah fund and pay withdrawal $2.000. If ED and DPF reserve at 31 Des is $500, determine the qardhul-hasan at 31 Dec 2005.

1. Takaful Fund at 1 Jan 2005 $10.000
2. Tabarru Contribution $3.000
3. Wakalah fee   ($130)
4. Return of investment $500
5. Profit sharing of operator 30%   ($150)
6. Withdrawal   ($ 2.000)
   Takaful Fund at 31 Dec 2005 $11.220

Liabilities of investment contract = $11.220 + $500 = $11.720

Qardhul-hasan = Max(0, $11.720 – $11.220) = $500

C. SERVICES CONTRACTS

Service contract is a contract that is intended the takaful management operations. This contracts have liabilities to policies holders as the operator of takaful company. The liabilities of service contracts is expenses reserve. The expenses reserve is present value of future cost and expenses minus present value of future ujroh (operator fee).

Liabilities = Actuarial liabilities + others liabilities

Actuarial liabilities = Expenses Reserve + Wadiah Reserve

Share holder Equity = Asset – Liabilities

Expenses Reserve in service contract is include of expenses reserve for liabilities of takaful an investment contract, thus reserve of takaful contract is exclude expenses.

C.1. Wadiah Contract

Wadiah is safekeeping of a deposit, the takaful operator is only keeping some policies holder money without any investment activities. On health insurance, this is done for ASO (admintration service only) contract as claim deposit fund. Premium deposit fund is sometimes categorized under wadiah contract.

The actuarial liabilities of wadiah contract is total deposit fund plus expenses reserve.

C.2. Al-Rahn Contract

Al-Rahn or collateral is defined in the islamic jurusprudence as "possessions offered as security for debt so that the debt will be taken from it in case the debtor failed to pay back the due money". In case of insurance the al-rahn contract are using ini policies loan with cash value as collateral. Position of Al-rahn in an asset of takaful company. The policies loan can be categorized as al-rahn contract. Al-rahn contract can be placed in an investment contract.

C.3. Qardhul-hasan

Qardhul-hasan is defined as loan from takaful operator to cover defisit fund on the takaful contract or investment contract. In this condition takaful operator must provide quardhul-hasan **without guarantee or interest**. Qardhul-hasan granted unconditional term of refund and without any service fee or expenses. Amount of qardhul-hasan is asset on corporate fund and liabilities on takaful fund or invesment fund.

Example 8 : The takaful company have wadiah fund at beginning 2005 is $10.000 and qardhul-hasan is $1.500, receive udjroh $3.000, return on investment $500, wadiah contribution $1.000, total expenses reserve $5.000 until 31 Dec 2005 and total company expenses is $2.000. If wadiah claim $450 and payback qardhul-hasan $500, determine the wadiah fund, qardhul-hasan and surplus/defisit company fund at 31 Dec 2005.

1.	Wadiah Fund	$10.000
2.	Wadiah Contribution	$1.000
3.	Wadiah Claim	($450)
	Wadiah Fund at 31 Dec 2005	$10.550
4.	Qardhul-hasan	$1.500
5.	Payback qardhul-hasan	($500)
	Wadiah Fund at 31 Dec 2005	$1.000

Thus

1.	Recieve udjroh	$3.000
2.	Return on investment	$500
3.	Decresing qardhul-hasan	$500
4.	Increasing Wadiah Fund	($550)
5.	Expenses	($ 2.000)
	Surplus/Defisit at 31 Dec 2005	$1.450

6.	Takaful Fund at 1 Jan 2005	$10.000
7.	Tabarru Contribution	$3.000
8.	Wakalah fee	($130)
9.	Return of investment	$500
10.	Profit sharing of operator 30%	($150)
11.	Withdrawal	($ 2.000)
	Takaful Fund at 31 Dec 2005	$11.220

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