



TEORI ASET KOMPOSIT DAN PENYUSUTAN KOMPOSIT

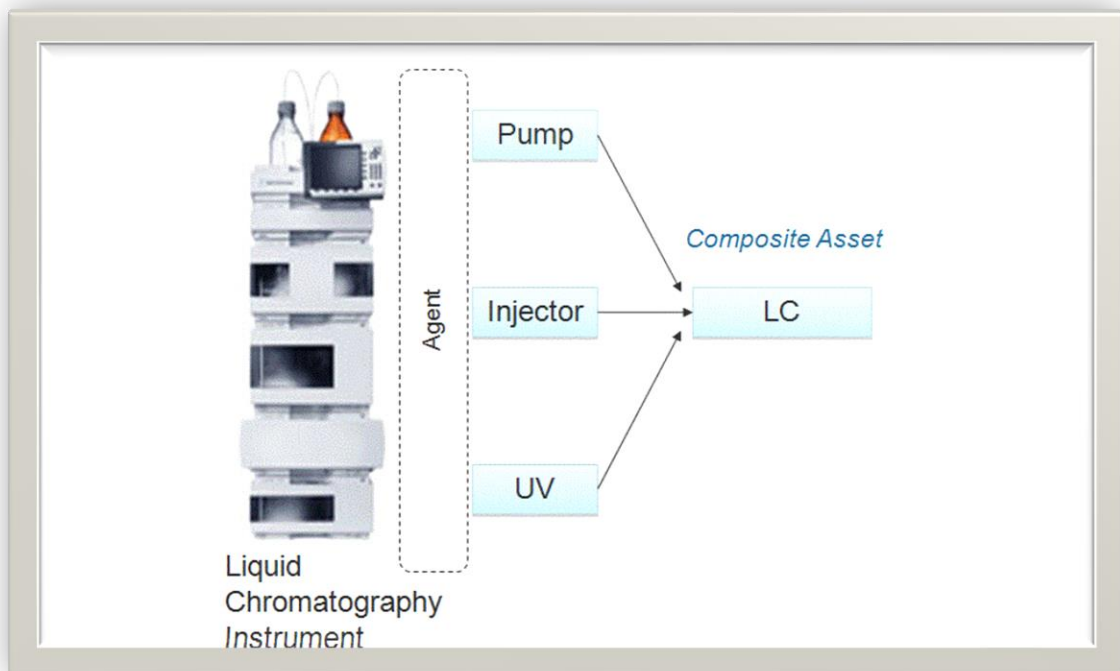
Dituturkan Dr Jan Hoesada

PENDAHULUAN

Pada suatu rapat KSAP tentang Akuntansi Jasa Konsesi, terbetik wacana penyusutan komposit. Makalah disajikan sebagai penjelasan konseptual tentang hal tersebut.

TEORI ASET KOMPOSIT

Akuntansi aset gelondongan merupakan sistem akuntansi bagi sekumpulan aset yang bekerjasama dalam sebuah sistem, atau *composite asset*. Aset individual tak dapat bekerja sendiri, bila tidak berada dalam sebuah kelengkapan, bersama aset komplementer lain. Desain dan penggunaan aset individual nan khas agar berkontribusi unik di dalam sistem tersebut, sehingga tak memiliki nilai ekonomi bila sendirian. Pemirsa di mohon melihat SAK/SAP yang digunakan, jangan jangan melarang sistem pencatatan gelondongan atau aset komposit. Contoh kumpulan aset kompatibel dan saling bergantung adalah sebagai berikut.



TEORI TI KOMPOSIT

Pada tataran TI, aplikasi komposit adalah sekumpulan perangkat lunak sebagai kombinasi sinergis berbagai fungsi yang menggunakan sumber informasi bisnis, sekumpulan perangkat lunak yang bekerja-sama pada sebuah platform kapabilitas, tanpa interupsi pindah aplikasi, pindah lokasi atau alternatif operasi secara manual.

TEORI EFEK KOMPOSIT

Teori aset-komposit berlaku pada manajemen reksadana. Mengambil hikmah makalah berjudul *Optimization with Composite Assets Using Implied Covariance Matrices* unggahan Northfield Information Services 184 High Street · Boston, MA 02110 · 617.451.2222 · 617.451.2122 fax www.northinfo.com (1998), pada tataran sekuritas pasar modal, racikan/pemasangan serumpun sekuritas individual membentuk aset-komposit bernama portfolio investasi. Terdapat berbagai (1) risiko bersama bagi seluruh jenis sekuritas beredar, misalnya risiko pandemi dan resesi global, (2) risiko individual setiap efek pasar modal terkait jenis sekuritas dan emiten sejalan dengan berbagai pemodelan faktor secara linear. Pemodelan risiko faktor secara linear dinyatakan oleh matriks-covariance-diharapkan berbagai-pulangan-sekuritas dalam bentuk sebuah matriks-covariance-faktor terujuk-setiap-sekuritas dan terujuk suatu bagian/porsi khusus pada sebuah sekuritas tertentu. Presumsi risiko khusus setiap sekuritas individual tak berlaku pada sekumpulan efek terangkai (*arranged*) secara komposit untuk optimalisasi pulangan-investasi berbasis keseimbangan risiko vs pulangan, dengan racikan proporsi tertentu oleh pakar-portfolio sebagai “juru masak”. Teori ini menunjukkan bahwa aset komposit secara sinergis mencipta nilai ekonomi yang jauh lebih tinggi dibanding gunggungan-nilai seluruh aset-individual, ibarat racikan lihai sambal matah yang memenuhi kebutuhan berbagai lokasi-citarasa-lidah atau sabetan/goresan kuas seorang maestro seperti Iwan Tirta pada sebuah kain-putih-matah (bhs.Jawa; blaco) murahan menyebabkan harga sebuah busana batik terjual beratus juta Rupiah. Bagi Global Investment Performance Standards (GIPS®), komposit harus dirumuskan sesuai mandat investasi, tujuan investasi dan strategi investasi, sehingga investor dapat membandingkan berbagai tawaran investasi-komposit (portfolio investasi). Sebuah portfolio investasi dengan sebuah merek dagang (merek produk), mengandung begitu banyak fitur pajak, lindung nilai, keluwesan, jangka waktu, mata-uang, jaminan/penjamin, dan banyak aspek lain, tak boleh secara diam-diam diganti komposisinya, sehingga sejarah kinerja portfolio dapat dimonitor para investor.

TEORI PENGGUNAAN KOMPOSIT.

Penggunaan komposit bermakna sekumpulan aset digunakan secara serentak bersama-sama dengan sebuah cara/sistem nan-konsisten dan seragam (*a well fit composite application*) kalau mungkin langsung saja atau *nir-interface*, pengoperasian aset secara individual berbeda-beda namun berada dalam sebuah harmoni dengan aset individual lain menuju suatu sasaran bersama. Terdapat pula komunikasi interaktif antar aset individual, agar saling menyesuaikan diri dengan yang lain, dalam sebuah *orchestra harmony* nan-sinergis dalam sebuah *interconnected environment*. Karena itu, dalam akuntansi, nilai ekonomi serumpun-aset-komposit jauh lebih tinggi dibanding jumlah nilai-ekonomi-individual seluruh aset-

individual. Bila sebuah aset individual mala-fungsi, maka seluruh sistem terganggu bahkan berisiko terhenti.

TEORI AKUNTANSI KOMPOSIT

Pada negara AS ber FASB, konvensi aset-komposit dan penyusutan aset-komposit adalah bagian resmi GAAP, yang lalu digunakan sebagai basis membuat pedoman akuntansi berbagai industri di AS. Apabila manajemen memandang tidak mungkin atau tidak praktis memperlakukan dan mengakuntansikan sekumpulan AT dan/atau ATB secara individual, maka entitas LK memilih menggunakan metode rumpun (*group method*) AT/ATB.

PricewaterhouseCoopers mengunggah wacana tentang *the mass-asset convention of accounting (the "group" method)* untuk AT tertentu sebagai sisi lain dari *the unitary convention of accounting for fixed assets*. Pada perkembangan FAS, FASB dan SEC secara evolusionair (bertahun-tahun) mempertimbangkan faktor kewajiban-paska-penggunaan (*Asset Retirement Obligation* atau ARO) yang memperhitungkan estimasi-hasil-pelepasan-bersih AT-Dihentikan-Penggunaan atau AT-Paskaguna ke dalam beban penyusutan sepanjang umur ekonomi AT/ATB. Pada paska-masa-pakai, hasil pelepasan aset-gelondongan habis-susut dikurangi biaya pelepasan seluruh atau pretelan aset-bekas-pakai digunakan sebagai kredit pada akun bangunan (*plant account*), di debit ke akun akumulasi-penyusutan, tidak diakuntansikan sebagai untung/rugi peristiwa peroyaan (penghentian pemakaian dan penjualan sisa-habis-pakai) AT.



Kieso, Weygandt, and Warfield dalam karya berjudul *Intermediate Accounting Text (11th Edition)*, menjelaskan dua metode penyusutan bila entitas menerapkan akuntansi AT/ATB Berumpun (*multiple-asset accounts*), yaitu *the group method of depreciation* bagi AT/ATB se-jenis & se-umur dan *the composite method of depreciation* bagi sekelompok AT/ATB heterogen & tak-seumur. Penghentian penggunaan suatu aset individual sebelum / sesudah *rerata-umur-ekonomis- aset-komposit* di-kubur (*buried*) dalam pos akumulasi-penyusutan, tak diakui sebagai untung/rugi penghentian-pakai.

Kita sejak lama sama-sama mafhum bahwa sebuah entitas LK menggunakan beberapa metode penyusutan AT/ATB untuk menggambarkan pola penggunaan, misalnya 2000 mobil penjualan/operasional PT Kecap ABC menggunakan *double declining balance method*, 400 mobil kantor dan pabrik PT Kecap ABC menggunakan *straight line method*, 315 mesin sarana produksi menggunakan *production output method* karena keausan berbasis jumlah

produksi, 217 mesin menggunakan straight-line method dengan ekonomis sesuai prospektus pembelian mesin.

Sebuah entitas LK dapat menggunakan secara-bersamaan atau sekaligus beberapa metode klasifikasi aset dan beberapa metode penyusutan, misalnya (1) menggunakan metode pengakuan AT/ATB Individual dan penyusutan AT/ATB secara individual (single unit depreciation method) , (2) mengelompokkan aset sejenis, se tujuan atau sejenis-pola-penggunaan dan seumur ekonomis *bila dibeli sekaligus bersama-sama*, misalnya 2.000 laptop atau 500 AC atau 100 Kijang bagi Departemen Keuangan Lapangan Banteng, yang diperkirakan berumur ekonomis sama dan ber-pola-pemeliharaan/reparsi serupa, dengan *the group method of depreciation* (3) mengelompokkan *serumpun-aset- heterogen-komplemen*ter untuk setiap kontrak-jasa-konsesi KPBU pada suatu entitas LK yaitu K/L tertentu, dengan *the composite method of depreciation*. Sebuah rumpun-aset-heterogen untuk tambang-berlian di sebuah pulau kecil tak berpenduduk ber-aset tanah senilai land-clearing, perataan dan pemadatan seluas 100 Ha Rp.500 Miliar digunakan untuk pabrik-pemilahan tanah/batu dengan batu berlian, mess karyawan, gudang , bioskop, fasilitas karaoke, kolam renang,dan golf Rp.2 Triliun. Akuntansi aset-komposit diturunkan menjadi akuntansi-penyusutan-aset-komposit , sesuai konsep konsistensi penerapan aturan komposit. Tanah tersebut tergolong dalam rumpun aset-komposit secara konsisten harus “ikutan” disusutkan secara berumpun, karena tak ada seorangpun mau membeli paska penutupan tambang.Bagaimana bila *land clearing* suatu KPBU pada pulau berpenduduk dan ber kegiatan-ekonomi ? Sama saja, harus ikutan di susutkan sebagai sebuah komposit tak di-identifikasi secara individual. Kalau pada saat peroyaan/penghentian proyek nanti, tanah dapat dijual , ya syukurlah, dapat digunakan mengurangi akumulasi-penyusutan-komposit (bukan untung (gain)), disamping menjual bekas gedung, gudang, pabrik dan lain-lain.

TEORI PENYUSUTAN KOMPOSIT

Pertama, Wiki Encyclopedia of Law Project (BETA) mengunggah wacana tentang Composite Depreciation. Composite Depreciation means: applying one depreciation rate to an entire group of assets. For example, in real estate the foundation and framing of a building may last more than 50 years, whereas the electrical and plumbing systems have much shorter lives, say 20 years. A composite rate provides a weighted average life, perhaps 33 1/3 years for real estate.

Kedua, Accounting CPE Courses & Books (2020) mengunggah artikel berjudul Composite depreciation definition , menjelaskan sebagai berikut. Composite depreciation is the application of a single straight-line depreciation rate and average useful life to the calculation of depreciation for a group of disparate fixed assets. The method is used to calculate depreciation for an entire asset class, such as office equipment or production equipment. Composite depreciation can also be used when there are a number of assets comprising a single larger asset; for example, the roof, air conditioning unit, and frame of a building may all have different useful lives, but can be aggregated for depreciation through the composite method. Another situation where composite depreciation can be used is for the depreciation of all the assets in an entire facility.

The method can result in the recognition of a depreciation amount that differs markedly from the amount that would be recognized if depreciation were separately calculated for each individual asset. This disparity can arise when the useful lives of the assets in a group are substantially different from each other.

Accounting for Composite Depreciation

The depreciation steps for this approach are:

1. Aggregate the total depreciable cost of all assets in the group.
2. Assign a single useful life to the asset group.
3. Divide the useful life figure by the total depreciable cost to arrive at the total depreciation per year under the straight-line method.
4. Record the depreciation for the entire asset group.

In short, composite depreciation involves the use of a weighted average of the depreciation rates for all of the fixed assets in a group.

If an asset that is being accounted for under this system is sold, the related accounting entry is a debit to cash for the amount received and a credit to the fixed asset account for the historical cost of the asset. If there is a difference between the two, record it against the accumulated depreciation account. This accounting treatment means that no gain or loss is recognized at the point of asset sale or disposal.

When to Use Composite Depreciation

Given the ease with which fixed asset accounting software can track the depreciation for individual assets, it is not really necessary to use composite depreciation, which may explain its rare usage. The system may have had greater applicability when manual record keeping was needed for fixed assets. Even then, the use of a high capitalization limit would prevent numerous assets from being recognized as fixed assets, thereby reducing the amount of manual accounting labor.

A possible use for composite depreciation is when an acquirer is processing the fixed asset records for an acquiree, and wants to create a depreciation calculation for a large number of assets with a minimal amount of effort.

Ketiga, Unggahan Study.com adalah sebuah studi kasus sebagai berikut. WillieMae Exiter inc. owns the following assets: a) What is the composite depreciation rate of Exiter's asset? b) What is the composite life of Exiter's assets?

WillieMae Exiter inc. owns the following assets:

| Asset | Cost | Salvage | Estimated Useful Life |
|-------|-----------|----------|-----------------------|
| A | \$140,000 | \$14,000 | 10 Years |
| B | \$75,000 | 7500 | 5 Years |
| C | \$164,000 | 8,000 | 12 Years |

Composite Depreciation:

Composite depreciation is the application of a single straight line depreciation rate over different assets of similar class and nature. It is computed by total depreciable value by weighted average useful life.

Answer and Explanation:

Computation of total depreciable value

| Asset | Cost | Salvage | Depreciable Value |
|-------|------------|----------|-------------------|
| A | \$1,40,000 | \$14,000 | \$1,26,000 |
| B | \$75,000 | \$7,500 | \$67,500 |
| C | \$1,64,000 | \$8,000 | \$1,56,000 |
| Total | \$3,79,000 | \$29,500 | \$3,49,500 |

Computation of composite useful life of assets

| Asset | Depreciable Value | % of total depreciable value | Estimated Useful Life (Years) | Product |
|-------|-------------------|------------------------------|-------------------------------|---------|
| A | \$1,26,000 | 36.05% | 10 | 3.61 |
| B | \$67,500 | 19.31% | 5 | 0.97 |
| C | \$1,56,000 | 44.64% | 12 | 5.36 |
| Total | \$3,49,500 | | | 9.93 |

Composite useful life = 9.93 years or 10 years (approx.)

Answer (a)

Composite depreciation rate = Total depreciable value / Weighted average of useful life

Composite depreciation rate = \$349,500 / 10 years

Composite depreciation rate = \$34,950 per year

OR

Composite depreciation rate = 10% of depreciable value

Answer (b)

Composite useful life of assets = 10 years

Keempat, LIVE CHAT (2020) mengunggah artikel berjudul Group And Composite Depreciation Method sebagai berikut. Sometimes asset of similar kinds with approximately similar useful economic life are combined rate of depreciation is applied. This process is known as group depreciation. If dissimilar assets are depreciated together, the process is called composite depreciation. The use of group or composite rate of depreciation eliminated the clerical work involved in computing periodic depreciation for individual pieces of equipment owned by the business. Moreover, there is no need for detailed records for accumulated depreciation on each machine. If group or composite depreciation methods are used, no gain or loss is recognized on sale or retirement of different units in a group. It is assumed that the unit has been fully depreciated. It further assumes that over-depreciation and

under-depreciation charges offset each other. The simple entry to be passed on disposal is to credit the asset account and debit the accumulated depreciation account, as it is assumed that gains on sale of some assets are balanced by losses in others. The depreciation rate is computed as a weighted average; the weights being the money cost of the assets in each category. This is illustrated below:

The Composite Life for this group of assets is:
 $\text{Depreciation cost/Annual Depreciation} = 8,900/1,700 = 5.24$ years
 Assuming the use of straight line method.... or any other method.... the annual rate to be applied is:
 $\text{Annual Depreciation / Total Cost} = 1,700/10,000 = .17$ or 17 %
 The 17 % represents a mean average rate which when applied to total cost of Rs. 10,000 over 5.24 years accumulated Rs. 8,900 (rounded $17\% \times 5.24 \times 10,000$), the cost to be depreciated. The annual depreciation charge is 1,700 ($10,000 \times 17\%$). The average rate is used until such time as purchases and disposals change relationship within the asset group – with respect to types of assets, estimates useful lives etc. – so as to make necessary the computation of a new group rate.

Kelima, Mandalika pada Tutorial Point mengunggah makalah berjudul Describe concept of composite depreciation, menjelaskan antara lain sebagai berikut. Composite depreciation claims depreciation expenses by depreciates group of related assets into single entity than individual. Composite depreciation is the application of straight-line depreciation. If the asset is sold, then account entry is debited to cash and credited to fixed asset. The difference between original cost and sold cost is debited to accumulated depreciation. In composite method, no loss or no gain on sale of fixed asset is recognized.

Steps to calculate composite depreciation are as follows –

- Accumulation of total depreciation cost of assets.
- Allocate single useful life for asset group.
- $\text{Yearly depreciation} = \text{useful life/ total depreciation}$.
- Document the depreciation.

Example

- Calculate depreciation using composite depreciation, the data is given below.

| Asset | Cost (Rs.) | Residual value (Rs.) | Lifespan (years) |
|-----------|------------|----------------------|------------------|
| Asset – 1 | 10000 | 2000 | 8 |
| Asset – 2 | 25000 | 4000 | 7 |
| Asset – 3 | 5000 | 500 | 3 |
| Asset – 4 | 80000 | | 10 |

Solution

The solution is as follows –

| Asset | Cost (Rs.) | Residual value (Rs.) | Depreciation (Rs.) | cost Lifespan (years) | Deprecation (Rs.) |
|---------|------------|----------------------|------------------------|-----------------------|-------------------|
| Asset 1 | 10000 | 2000 | $10000 - 2000 = 8000$ | 8 | $8000/8 = 1000$ |
| Asset 2 | 25000 | 4000 | $25000 - 4000 = 21000$ | 7 | $21000/7 = 3000$ |
| Asset 3 | 5000 | 500 | $5000 - 500 = 4500$ | 3 | $4500/3 = 1500$ |
| Asset 4 | 88000 | | $88000 - 0 = 88000$ | 10 | $88000/10 = 8800$ |
| Total | 128000 | | | | 6600 |

Group depreciation = depreciation / total cost

$$= 6600 / 128000$$

$$= 5.16\%$$

Average useful life = 1/group depreciation

$$= 1/5.16\%$$

$$= 19.38 \text{ years}$$

Keenam, Daniel Liberto (2020) mengunggah artikel berjudul Group Depreciation, menjelaskan sebagai berikut.

Group depreciation combines similar fixed assets into a pool with a common cost base for calculating depreciation on financial statements. The assets grouped together should be similar in the way they function, or each asset should be small enough that it is not considered material on its own.

Because modern accounting software easily records depreciation for individual assets, the use of group depreciation, also known as "composite depreciation", has become less common.

- Group depreciation combines similar fixed assets into a pool with a common cost base for calculating depreciation on financial statements.
- By pooling assets that are similar in nature, a company can simplify its depreciation calculation, saving it time and money.
- Assets can only be assembled into a group if they share similar characteristics and have the same useful lives.
- Because modern accounting software easily records depreciation for individual assets, the use of group depreciation has become less common.

Understanding Group Depreciation

Depreciation is an accounting technique that allows business owners to write off an asset's value gradually—commonly over the course of its useful life or life expectancy. Rather than realizing the entire cost in year one, depreciating the asset enables companies to spread out that cost and match it to associated revenues.

Companies generally make lots of purchases over the years, giving them numerous assets and expenses to keep track of. To make life easier, it's sometimes possible to get around this arduous exercise by depreciating a group of similar assets as a single entity, rather than individually.

By pooling assets that are similar in nature, such as office equipment or delivery trucks that travel about the same distance every year, a company can simplify its depreciation calculation and save time and expense for accounting and auditing tasks. When applied correctly, this can be achieved without compromising accuracy.

Group Depreciation Requirements

Before deciding to pool assets into one group, it is important to consider how each asset will be depreciated individually, a process known as unit depreciation, and whether it makes sense to group this asset with any others.

Assets can only be assembled into a group if they share similar characteristics and have roughly the same useful lives—the number of years they're likely to remain in service for the purpose of cost-effective revenue generation.

In general, group depreciation is meant to be used for multiple smaller items of lower cost. The Financial Accounting Standards Board (FASB), an independent nonprofit organization responsible for establishing accounting and financial reporting standards for companies in the United States, recommends that unit depreciation is applied to fixed assets that have large unit costs and are comparatively few in number and that group depreciation be applied to assets that are significant in number and have relatively small values.

These are suggestions, though, rather than requirements. In some cases, it is also possible for larger, more expensive items, including buildings, to be pooled together for group depreciation purposes.

Limitations of Group Depreciation

Group depreciation is, as previously mentioned, becoming rarer. Before, it was used to save time and money. Now there's less incentive to group assets together as there's accounting software capable of automating depreciation calculations.

Group depreciation has lost its luster as inexpensive accounting software can now track depreciation for individual assets with relative ease.

Group depreciation has also attracted some controversy. Among the biggest concerns is that an asset could purposely be inserted into a group composed of others with longer useful lives or larger salvage value assumptions. Taking such action would effectively delay expense recognition for the misplaced asset, triggering a boost in profits.

Ketujuh, Howard B. Levy, CPA pada CPA Journal (2021) menjelaskan teori penyusutan kelompok versus penyusutan komposit pada artikel berjudul Use of ‘Composite’ (or ‘Group’) versus ‘Component’ and ‘Unit’ Depreciation.

Composite depreciation is a method that entails grouping property items and applying an average estimated useful life to each asset group for depreciation purposes. Although FASB speaks of long-lived asset groups in terms of business combinations, impairments and disposals, it provides definitions and guidance as to “group” versus “unit” depreciation only with specific reference to the airline industry and (unfortunately) states without qualification that “ease of application is the [only] basis of selection” (ASC 908 360-35-1). Notwithstanding this, in its definitions that follow, FASB suggests (but does not require) that “unit depreciation is generally used for fixed assets ... that have large unit costs and are comparatively few in number,” and that “group depreciation usually is applied to groups of assets that are significant in number but have relatively small unit values.” In practice, group depreciation is commonly used for such things as manufacturing facilities and hotels, and groupings may be by any logical categories, such as year of acquisition, by specific type of asset or classification (e.g., all machinery), by location, or by a combination of these. Except in unusual circumstances, no gains or losses (or retroactive depreciation adjustments) are recognized upon disposition when a composite or group depreciation technique is used.

Composite or group depreciation has been a practical alternative to depreciating individual assets by components (unit or “component” depreciation), which is generally preferable when there are large variances in actual economic useful lives among the assets. Given the relative ease with which inexpensive accounting software can track depreciation for individual assets, however, composite depreciation is not as attractive an alternative as it once was, which may explain its rare usage today.

Although required under IFRS, the term component depreciation is not universally understood or used in the United States, nor is it mentioned at all in U.S. GAAP. According to nonauthoritative interpretive analysis material published online by Commerce Clearing House’s *Accounting Research Manager* (ARM), the term is often used when replacement components of a larger asset are significant in cost and have shorter lives than the basic unit. The term is also used in other nonauthoritative literature as a synonym for unit depreciation, as that term is used and defined by FASB, as well as to describe circumstances wherein large, complex assets (e.g., buildings) are broken down into components, most often at the time they are constructed or acquired, to enable the use of shorter lives for components likely to be replaced during the life of the larger asset.

PENUTUP

Secara eksplisit, akuntansi aset kelompok (group of assets) atau aset komposit (composite asset) , akuntansi penyusutan kelompok (group depreciation) atau komposit (composite depreciation) tidak terdapat pada SAP, karena berderajat sebuah konvensi akuntansi dalam khasanah GAAP.

Membutuhkan pertimbangan dan kearifan khusus untuk menggunakan metode akuntansi kelompok atau komposit. Memberlakukan kewajiban akuntansi AT dan penyusutan secara komponen/individual pada semua hal secara *gebyah uyah* , adalah naif , berisiko berdampak ekonomi biaya tinggi (*high cost economy*) , memberatkan kehidupan berakuntansi. Pada umumnya sebuah kelompok aset yang bekerja sama dalam sebuah kegiatan , yang tak

mungkin berfungsi sendiri sendiri secara individual, dapat diakuntansikan dalam konvensi aset komposit , misalnya sebuah pelabuhan, bandara, sebuah ruas jalan tol dengan atau tanpa KPBU.

Jakarta, 12 Maret 2021.