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# Deferred acquisition cost: Exploring the most simplified approach

## Background

In August 2018, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update 2018-12 (ASU 2018-12), amending the accounting model under US GAAP for certain long-duration insurance contracts and making major changes across multiple historical GAAP earnings emergence patterns. This is especially true when considering the amortization of deferred acquisition costs (DAC) across all insurance models and similarly amortized balances, such as sales inducement assets (SIA), unearned revenue reserves (URR), and potential changes based on company elections across purchase GAAP VOBA balances and reinsurance accounting cost-of-reinsurance balances.

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# Deferred acquisition cost amortization method explored



For the purposes of this point of view, the reference to DAC will be assumed to apply to all balances electing or required to use the ASU 2018-12 DAC amortization method. Unifying the basis of amortization across multiple insurance accounting paradigms creates a single methodology and reduces the complexity of the calculation. The new guidance is in 944-30-35-3A through 3C. The wording allows for a few interpretations that are largely based on current industry practices, but tend to generate some difficult methodology questions. This article explores the most simplified approach by promoting a set of challenging observations to avoid when developing one's own DAC amortization policy.

There are four key elements to consider when changing from today's DAC amortization methods to the LDTI DAC amortization method: deferrals, amortization basis (also known as revenue or gross profits), interest, and timing. The simplification of DAC amortization includes the removal of future expected deferable expenses in the determination of amortization rate. The impact of future deferrable expenses is explicitly prohibited (944-30-30-2) until the expense is realized. Today's methods include revenue as the amortization base, which creates additional complications hidden within the development of gross profits or margins when the DAC is for interest-sensitive or participating business. DAC under LDTI has eliminated the complexities of a revenue-based amortization. In fact, it is forbidden to match the expense amortization with revenue or profit (944-30-35-3C). This change to the amortization basis disconnects the amortization of DAC from the matching principle (revenue and expense alignment). As for the additional key elements, interest on the unamortized DAC balance has also been removed (944-30-35-3C). It appears that housecleaning of complexities has been successfully completed, with many of the most confusing elements removed.

On the most basic level, the new amortization amount is very clearly identified as a cost that is charged to expense on a seriatim (single-contract) straight-line basis over the expected term of the contract. The guidance goes on to explain that the grouping of contracts

is allowed if it is consistent with benefit reserve grouping, and approximates an individual-contract straight-line basis. Finally, the DAC asset cannot exist on a balance that has been extinguished due to excess and unexpected terminations (944-30-35-3B) and where there is no more impairment test. These new requirements are as simple as can be...or are they?

If we begin to break down the language and the intent (as any good accountant, analyst, or actuary will do), we note that the "expected term" is not defined. What does the expected term mean? Is it the same as the expected lifetime? Is this a constant number at every point in the future, or does it get recalculated? These questions are for the single policy. Then the grouping questions begin. If I group my contracts, how do I adjust the DAC balance to make sure my cohort approximates the individual straight-line basis? How do I address, and make the necessary adjustments for, excess or unexpected terminations? Do the two methods (single-contract and grouped) need to be equal, or simply approximately close? Or is it simply the same method applied to either data grouping that is required? Finally, the unspoken question that some companies do not even consider: timing. Under current US GAAP guidance, traditional product DAC is amortized at the beginning of the period, and interest-sensitive product DAC is amortized at the end of the period (see table 3). When does the LDTI DAC amortization timing take place: the beginning or the end of the period? How does this affect my amortized, unlocking, or true-up amounts? Let's try to answer some of these questions by aligning the DAC amortization method with the straight-line depreciation method.

Since the straight-line method is explicitly identified in the guidance, it may be helpful to revisit the definition of "straight-line basis." We can start by explaining this through our understanding of straightline depreciation. This is essentially the manner in which the value of an asset is run off over the useful lifetime to the ultimate value. Here is a simple, classic example of straight-line depreciation.

description	)		stra	aight line		
purchased value				800		
estimated useful lifetime	5	4	3	2	1	0
amortization amount				160		
item\time =>	0	1	2	3	4	5
beginning balance	800	640	480	320	160	0
amortization	160	160	160	160	160	
ending balance	640	480	320	160	0	

#### Table 1. Straight-line depreciation table example

Table 1 establishes the amount to amortize at initial purchase as 800. The purchase has a five-year estimated useful lifetime to reach the ultimate value (zero). This is of interest because it clearly shows a constant-level basis (and no interest) using a pivot approach. The constant-level basis occurs when the timing of depreciation is measured at the beginning of the year. Our DAC straight-line amortization method takes away the following from this example:

- The expected term is the useful lifetime, which is defined by the final runoff amount (zero in this example). For our purposes, the final run-off amount can be a zero unamortized DAC balance or a sufficiently small population of contracts in a cohort as defined by the accounting policy. The policy would include considerations for shock lapse rates, maturity dates, separation of product life cycles, and extinguishment of the underlying account value.
- The constant rate of amortization is recalculated at every point in time. This is consistent with a pivot method that also introduces new deferrals (as the new deferrals have a shorter useful lifetime).

The straight-line depreciation method is usually used on each individual asset separately. If, however, we group assets together that have different useful lifetimes, a combined duration would result. Based on this combination, the useful lifetime is extended for some and shortened for other assets. Since the objective of this approach is to simplify or improve the DAC amortization, it has been proposed that this combined duration is acceptable. As long as the remaining amount is amortized consistently across the future lifetime, and the balance associated with policies that drop from the cohort is removed from the ending unamortized balance, this is sufficient to meet the requirements of the guidance. The same method is applied both at a cohort level and at a seriatim level, and the amount is always decreasing (save for new deferrals).

This useful lifetime can be projected to zero lives or to a certain threshold. It is important to include in the actuarial projections used to determine the useful lifetime the appropriate phases of the contract. For example, the lifetime of a deferred annuity does not include the payout phase of the contract. Table 2 uses the cumulative useful lifetime (sum of the estimated useful lifetime is the sum of the row immediately above within the table) and applies the straight-line approach using this sum as the denominator. This is done to expand the example and address true-up of inforce data and assumption unlocking.

description	straight line					
purchased value	800					
time	0	1	2	3	4	5
estimated useful lifetime	5	4	3	2	1	0
estimated useful lifetime	15	10	6	3	1	0
amortization amount	53	53	53	53	53	
item\time =>	0	1	2	3	4	5
beginning balance	800	533	320	160	53	0
amortization	267	213	160	107	53	
ending balance	533	320	160	53	0	

## Table 2. Straight-line depreciation table sum of useful lifetime example

In our simple example in table 2, if the useful lifetime were to increase by half a year after year one, but the ultimate value were to stay the same, the impact of this change would stretch the amortization period into the future, and the current value would be unaffected. The current unamortized balance stays the same, but the future amortization amount is lower due to an increased denominator. This reduction in amortization allows the ultimate value to be realized half a year later. Here, the total amount amortized is still 800. The same would be true for an unanticipated shortening of the lifetime of the asset (with movements reversed and starting balance unaffected). This example is a single item being amortized, but the concepts set a sound expectation related to how the straight-line DAC amortization should move. So far, we have addressed the useful lifetime of a contract used in the DAC amortization period and the method (whether a single life or grouped cohort), but we have not addressed timing. Timing under the LDTI DAC amortization method would appear moot, given the lack of interest. A consideration of the previous straight-line example does not support that hasty conclusion. Table 3 details the current simple US GAAP DAC annual amortization formulas (no unlock or true-up included) that show the timing of amortization (before or after interest credited). Additionally, assuming a 10% lapse rate, no mortality, and a beginning-of-period policy inforce (PIF) count of 1,000, we would expect 1,000 \* (1 – .10) = 900 at the end of the period.

product (timing)	US GAAP DAC annual amortization formula	LDTI DAC PIF count	·····>
traditional (beginning)	DAC(t) = [ DAC (t–1) + deferrals(t) – (k%) * gross premium (t–1) ] * (1+i)	1,000	
interest-sensitive (end)	DAC(t) = [ DAC (t–1) + deferrals(t)] * (1+i) – (k%) * gross profits(t)	900	

## Table 3. Current GAAP DAC amortization timing

Based on the straight-line method analysis, the LDTI DAC amortization is calculated based on the beginning-of-period timing (policies inforce at the beginning of the period determine the pivot). This method follows naturally from the identification of the straight-line approach. The future lifetime is established at the beginning of any period for amortization that occurs at the beginning of the period. The final unamortized DAC balance requires additional consideration of events that occurred during the period. Commissions are paid at the beginning of the period. We no longer wait for earnings to develop, as observed under pre-LDTI GAAP methods, and there is no interest accrual. Amortization at the beginning of the period applies equally well to grouped business and seriatim business. This allows the changes in population and assumptions to run through the future expected contract term, as intended by the guidance (944-30-35-3B).

There are several benefits to beginning-of-period amortization. Since the amortization basis amount includes the actual beginning of the period inforce as the basis (not a projection), the amount of amortization does not change. This is consistent with traditional DAC amortization base in table 2. The cost related to new issues is established at the beginning of the measurement period if we project inforce from the beginning of the period. Excess lapses are removed from the final DAC balance when the inforce is refreshed. If the unamortized DAC calculations are seriatim, this is accomplished by dropping lapsed policies from the inforce. A cohort presents some issues that require a type of proportional adjustment to remove unamortized DAC balances remaining after decrements in excess of the expected decrements (mortality, lapse, etc.) decrease the cohort population. Assumption unlocking affects the future lifetime (representing unlocks measured at the end of the financial period, but occurring at the beginning of the period, and does not require complex retrospective adjustment).

Take cohort definition as an example. LDTI eliminated the premium deficiency test for traditional life products. The LFPB, however, requires the Net Premium Ratio to be capped at 100%, which essentially forces the recognition of losses to the cohort level. As companies finalize their interpretation and contract groupings under LDTI, it's possible they will arrive at a cohort definition that allows some level of loss offset within the permissible spectrum of practices. However, some companies may desire for a source of earnings - SOE analysis to drill down to a more granular level in order to investigate the profitability of certain products or businesses. In that case, the company's LDTI implementation journey should configure its systems to include additional data requirements or processing in order to allow for more granular management analysis.



# Alternative to a proportional adjustment

The beginning-of-period amortization above begins with the actual policies inforce at the beginning of the period. All actuarial projections are based on the beginning of the period inforce. This is why the end-of-period reported balance requires an adjustment. Given, however, that we know the end-of-period inforce, what are our projections started with the observed decrements already reflected? This subtle change in approach, consistent with the straight-line beginning-of-period, eliminates the need for proportional adjustments. Beginning with the end-of-period actual inforce that includes any actual excess decrements leads to an observed and expected alignment, a different amortization amount, and no proportional adjustments.





# Actual deferred acquisition cost amortization examples

In this section, we explore a few amortization methods proposed by the industry, identifying their weaknesses and why the election is less clearly related to the straight-line method.

# Deferred acquisition cost single-contract versus cohort approach

The DAC amortization can be quite different for seriatim (singlecontract) calculations versus a cohort approach (grouped basis). Holding to the primary objective of the guidance ("The amendments simplify the amortization of deferred acquisition costs and other balances...") should guide the design of an amortization method. Retaining this simplicity gets difficult when applying the guidance to a cohort versus seriatim.

The primary difference between the two elections is an extended or shortened duration for the expected term of the amortization period relative to the seriatim approach. Additionally, the cohort language indicates that the method is a "944-30-25-3A ... constantlevel basis that approximates straight-line amortization on an individual contract basis." This creates a pause in the mind of the methodology designer. How does one achieve or justify that the grouped approximation is reasonable? Given the objective, however, it would appear that a straight-line approach for the cohort is the constant-level method being defined and is, by its nature, a reasonable approximation.

The grouped approach has the added complexity of monitoring the final inforce and how this change affects the expected term. There is no required adjustment to the unamortized DAC amount for lessthan-expected decrements. What happens when there are more lapses than expected? Excess lapses may drive unamortized DAC cohort adjustments (reduction of the DAC balance in accordance with 944-30-35-3B) for excess lapse experience. The beginningof-period amortization is straightforward, but would also include an excess-lapses adjustment to the extent that lapses are greater than expected and inforce projections begin with the beginning of the period inforce. No adjustments to unamortized DAC are necessary if DAC inforce projections begin with the actual end of period inforce. The future DAC expected term will be extended into the next amortization period. This is consistent with 944-30-25-2B requirements, which would reflect any inforce or assumption change impacts in the next period's amortization amount (spread through the extended term).

It is clear that grouping and single-contract methods will result in different balances. If, under either the grouping approach or the single-contract approach, the amortization is a constant-level basis as required (but not equal), this meets the requirements of the guidance. From a method perspective, these are the same. The grouped contracts requirement method is such that the grouped method is the same as a "straight-line amortization on an individual contract basis."

## Amortization at the end of the period

Amortization at the end of the period (or year) creates additional complications in the process. The actuarial projections for hundreds or thousands of individual lives in a cohort. The accelerated or decelerated decrements will affect the DAC amount amortized versus the DAC amount released from any grouped cohort. For example, if fewer contracts lapse, should the amount amortized actually decrease? What about extra lapses? The guidance expressly indicates that the DAC balance impacts due to fewer lapses should affect future estimates (expected term, which includes experience and assumptions), but actual experience in excess of assumptions that reduce the DAC balance are recognized directly in the current balance. If we amortize at the end of the period, this creates a challenge. If the inforce is persistent, the end-of-period amortization straightline method duration would be extended, and the current-period amortization would be less than the initially calculated amortization, resulting in an increased DAC balance, which is prohibited.

Approaching DAC amortization with an end-of-period amortization view requires the creation of a justifiable adjustment at the end of the period. The previously mentioned beginning-of-period straightline approach can be completed with or without an adjustment. The beginning-of-period amortization amount only changes the future unamortized DAC balances in accordance with guidance. Each company must elect the timing of amortization it feels is most appropriate for the line of business in question and apply this election consistently in the future.

# Conclusion

In all, the simplified amortization of DAC that follows a straight-line, beginning-of-period amortization approach meets the objectives of the targeted improvements guidance, provides a transparent impact, and reduces the overall mechanical effort associated with determining the amortization schedule. By including both the actual beginning-of-period inforce and the actual end-of-period as the projection point, no proportional adjustments are necessary. One can also elect an end-of-period approach. Both approaches meet the requirements of the targeted improvements. Due to transparency and simplicity, the election of a straight-line beginningof-period amortization approach with a beginning projection point, including the end-of-period inforce, is truly a targeted improvement.





# Contacts

## Thomas Q. Chamberlain, ASA, MAAA

Managing director Actuarial and Insurance Solutions Deloitte Consulting LLP tchamberlain@deloitte.com +1 312 486 3828

# Matthew Clark, FSA, CFA, CERA, MAAA

Principal Actuarial and Insurance Solutions Deloitte Consulting LLP matthewclark@deloitte.com +1 312 486 0185

## Rick Sojkowski

Partner retired Audit & Assurance Deloitte & Touche LLP rsojkowski@deloitte.com +1 860 725 3094

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