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Technology Highlights
Challenges Associated With Applying the New Revenue Standard: Residual Approach to Estimating Stand-Alone Selling Prices and Allocating the Transaction Price When a Value Relationship Exists

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For public entities, the new revenue standard (ASC 606[1]) became effective for annual reporting periods beginning after December 15, 2017. The standard is effective for all other entities for annual reporting periods beginning after December 15, 2018. Early adoption is permitted for annual reporting periods beginning after December 15, 2016.

While ASC 606 will affect organizations differently depending on their facts and circumstances, we have identified certain aspects of its application that are especially challenging for technology companies. This Technology Alert is the fourth installment in a series intended to help technology entities better understand the new guidance, particularly private organizations that are currently adopting the standard's requirements. For previously issued Q&As in this series, see Deloitte's July 24, 2018; December 14, 2018; and February 28, 2019, *Technology Alert* publications.

Executive Summary

In the software industry, various factors may make it challenging for an entity that has entered into a contract with a customer to determine the stand-alone selling prices (SSPs) of goods and services promised in the contract. Such factors may include, but are not limited to, (1) highly variable or uncertain pricing, (2) lack of stand-alone sales for one or more goods or services, and (3) pricing interdependencies such that the selling price of one good or service is used to determine the selling price of another good or service in the same contract.

[1] For titles of *FASB Accounting Standards Codification* (ASC) references, see Deloitte's "Titles of Topics and Subtopics in the *FASB Accounting Standards Codification*."

ASC 606 provides guidance on determining SSPs, including the guidance in ASC 606-10-32-34(c) on using the residual approach to estimate SSPs when prices are highly variable or uncertain. In addition, a combination of methods may be used in accordance with ASC 606-10-32-35 if two or more goods or services have highly variable or uncertain SSPs. However, ASC 606 does not provide guidance on estimating the SSP of a good or service when the price of that good or service is dependent on the price of another good or service in the same contract.

Entities in the software industry often sell postcontract customer support (PCS) to customers in conjunction with a software license. Sometimes, PCS is priced as a percentage of the contractually stated selling price of the associated software license (e.g., 20 percent of the net license fee), including upon renewal. Q&A 7-1 of Deloitte's *A Roadmap to Applying the New Revenue Recognition Standard* states that in these circumstances, if an entity does not have observable pricing of PCS based on renewals of PCS priced at consistent dollar amounts, it may be appropriate for the entity to consider PCS renewals stated as a consistent percentage of the license fee to determine the observable SSP for PCS. That is, even if an entity's license pricing is highly variable and the dollar pricing of PCS in stand-alone sales (i.e., renewals) is therefore also highly variable, the observable SSP of PCS may still be established if PCS renewals are priced at a consistent percentage of the license fee, the entity has consistent pricing practices, and the SSP results in an allocation that is consistent with the overall allocation objective.

Interpretive Guidance

Although the new revenue standard includes the residual approach as a suitable method for estimating the SSP of a good or service in a contract, use of the residual approach is intended to be limited to situations in which the selling price of the good or service is highly variable or uncertain. Before applying the residual approach, an entity should consider whether (1) it has an observable SSP for the good or service or (2) it can estimate the SSP by using another method (e.g., adjusted market assessment or expected cost plus a margin approach). When the entity cannot determine the SSP of the good or service by using another estimation method (e.g., because the SSPs of the license and PCS, respectively, are highly variable), it may be appropriate to apply the residual approach. In some instances, a combination of approaches may be needed to determine SSPs and the resulting transaction price allocation. On the basis of available data and established internal pricing strategies and practices related to licenses and PCS, an entity may determine that it has established a "value relationship" between the license and the PCS. If this value relationship is sufficiently consistent, the entity may use it to estimate the SSPs of the license and PCS, respectively. For example, if the PCS is consistently priced and renewed at 20 percent of the net license fee, the entity may conclude that it is appropriate to consistently allocate 83 percent of the transaction price to the license (1 ÷ 1.2) and 17 percent to the PCS (0.2 ÷ 1.2).

In addition, if a license is not sold separately because it is always bundled with PCS, the entity might analyze its historical pricing for that bundle and conclude that such pricing is highly variable. If the bundle also includes another good or service (e.g., professional services) for which there is an observable SSP, a residual approach may be appropriate for determining the combined SSP for the license and PCS bundle if the resulting estimated SSP is reasonable.

These concepts are illustrated in the question and answer (Q&A) below.

Q&A — Residual Approach to Estimating SSPs

Entity X is a software vendor that licenses its software products to customers. The entity has determined that its licenses are functional intellectual property in accordance with ASC 606-10-55-59.

Entity X enters into a contract with a customer to provide a perpetual software license bundled with one year of PCS and professional services in return for $100,000. While PCS and professional services are sold on a stand-alone basis, the license is never sold separately (i.e., it is always sold with PCS). Entity X concludes that the license, PCS, and professional services represent distinct performance obligations.

The contractually stated selling prices are as follows:

- *License* — $70,000.
- *PCS* — $14,000 (20 percent of $70,000).
- *Professional services* — $16,000.

After analyzing sales of the bundled license and PCS (the "bundle"), X concludes that the pricing for the bundle is highly variable and that a residual approach is appropriate in accordance with ASC 606-10-32-34(c).

Entity X has an observable SSP for professional services of $25,000. In addition, the PCS is consistently priced (and may be renewed) at 20 percent of the net license fee stated in the contract (for simplicity, a range is not used). Entity X determines that it has observable data indicating that there is a value relationship between the perpetual license and the PCS since the PCS is consistently priced at 20 percent of the contractually stated selling price of the license, including on a stand-alone basis upon renewal. Consequently, X concludes that the SSP of the PCS is equal to 20 percent of the selling price of the license.

Question

How should X allocate the transaction price to the license, PCS, and professional services?

Answer

We believe that the two alternatives described below ("Alternative A" and "Alternative B") are acceptable methods for allocating the transaction price to the performance obligations. To determine which alternative is more appropriate, an entity should consider the facts and circumstances of the arrangement. For example, we believe that when an entity has no (or insufficient) observable data available to determine the SSP for the PCS, it generally would not be appropriate to use Alternative B.

Alternative A

Since the pricing of the bundle that comprises the license and the PCS is highly variable and there is an observable SSP for the professional services, X may apply the residual approach to determine the SSP of the bundle (step 1). If the resulting amount allocated to the bundle is reasonable and consistent with the allocation objective, X may then use the value relationship to determine how much of the transaction price that remains after allocation to the professional services should be allocated between the license and the PCS (step 2).

Step 1

Under step 1, X would determine the residual transaction price to be allocated to the bundle as follows:

Total transaction price	$	100,000
Less: observable SSP (professional services)		25,000
Residual transaction price	$	75,000

Step 2

Next, under step 2, X would allocate the residual transaction price to the license and PCS as follows:

Residual transaction price	$	75,000	
PCS value relationship (% of license)		20%	
PCS value relationship (% of bundle)		17%	(0.2 ÷ 1.2)
Transaction price allocated to PCS	$	12,750	($75,000 × 17%)
Transaction price allocated to license	$	62,250	($75,000 × 83%)

The table below summarizes the allocation of the total transaction price to the performance obligations.

Performance Obligation	Contract Price	SSP	SSP Method(s)	Relative SSP (%)*	Allocated Amount**	% of License SSP
Professional services	$ 16,000	$ 25,000	Observable SSP	25%	$ 25,000	
PCS	14,000	12,750	Residual and value relationship	13%	12,750	20%
License	70,000	62,250	Residual and value relationship	62%	62,250	
	$ 100,000	$ 100,000		100%	$ 100,000	

* To calculate the relative SSP percentage, X would divide the SSP of each performance obligation by the sum of all of the performance obligations' respective SSPs.

** To calculate the amount allocated to each performance obligation, X would multiply the relative SSP percentage for the performance obligation by the total transaction (contract) price.

Alternative B

Given that the pricing of the bundle comprising the license and the PCS is highly variable, X may determine that the pricing of the license is also highly variable since it has observable data indicating that there is a consistent value relationship between the license and the PCS. In addition, X may determine that it has an observable SSP for the PCS since PCS is consistently priced at 20 percent of the contractually stated selling price of the license. Since X has observable SSPs for the PCS and professional services, respectively, it may apply the residual approach to determine the SSP of the license if the resulting amount allocated to the license is reasonable and consistent with the allocation objective.

Entity X would allocate the transaction price as follows:

Total transaction price	$ 100,000	
PCS value relationship (% of license)	20%	
Observable SSP (professional services)	25,000	
Observable SSP (PCS)	$ 14,000	($70,000 × 20%)
Residual transaction price (license)	$ 61,000	($100,000 – $25,000 – $14,000)

The table below summarizes the allocation of the total transaction price to the performance obligations.

Performance Obligation	Contract Price	SSP	SSP Method(s)	Relative SSP (%)*	Allocated Amount**	% of License SSP
Professional services	$ 16,000	$ 25,000	Observable SSP	25%	$ 25,000	
PCS	14,000	14,000	Observable SSP via value relationship	14%	14,000	23%
License	70,000	61,000	Residual	61%	61,000	
	$ 100,000	$ 100,000		100%	$ 100,000	

* To calculate the relative SSP percentage, X would divide the SSP of each performance obligation by the sum of all of the performance obligations' respective SSPs.

** To calculate the amount allocated to each performance obligation, X would multiply the relative SSP percentage for the performance obligation by the total transaction (contract) price.

Conclusion

In selecting an appropriate alternative to determine an SSP in accordance with ASC 606-10-32-33, an entity should consider "all information (including market conditions, entity-specific factors, and information about the customer or class of customer) that is reasonably available to the entity" and should "maximize the use of observable inputs." Further, any allocation achieved through the use of the residual method should be (1) assessed for reasonableness and (2) consistent with the allocation objective in ASC 606-10-32-28.

While we believe that both of the alternatives discussed above are acceptable methods for allocating the transaction price to the performance obligations, we acknowledge that practice may evolve over time. As practice evolves, the applicability of the alternatives described above is subject to change. Companies should continue to monitor changes in interpretations and consider consulting with their accounting advisers.

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