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Information Produced by the Entity (IPE) - a guide

Practical considerations when using IPE

Contents

1 Overview

This guide has been developed to assist auditors in enhancing their understanding of information produced by the entity (IPE) that is used as audit evidence, including practical guidance as to how to consider and apply the requirements of the International Standards on Auditing (UK and Ireland) 500, AAM 00100 and AAM 22500-1. Accordingly, this guide has been designed for use by engagement teams performing audits in accordance with the ISA (UK and Ireland).

This guide does not establish requirements for the performance of an audit in accordance with Deloitte LLP's Audit Approach. In addition, the examples included are illustrative only and are not meant to represent a complete population of procedures that might be applicable or appropriate in all circumstances. In some instances, a combination of procedures may be appropriate in order to obtain sufficient appropriate audit evidence about the accuracy and completeness of IPE. Auditor judgment is necessary in making this determination.

Potential pitfalls that auditors may encounter are also identified and these include matters highlighted in regulatory and practice reviews.

2 IPE that is relevant to our audit and related testing approaches

2.1 What is IPE

ISAs (UK and Ireland) do not provide a definition of information produced by the entity (IPE) or describe what constitutes IPE.

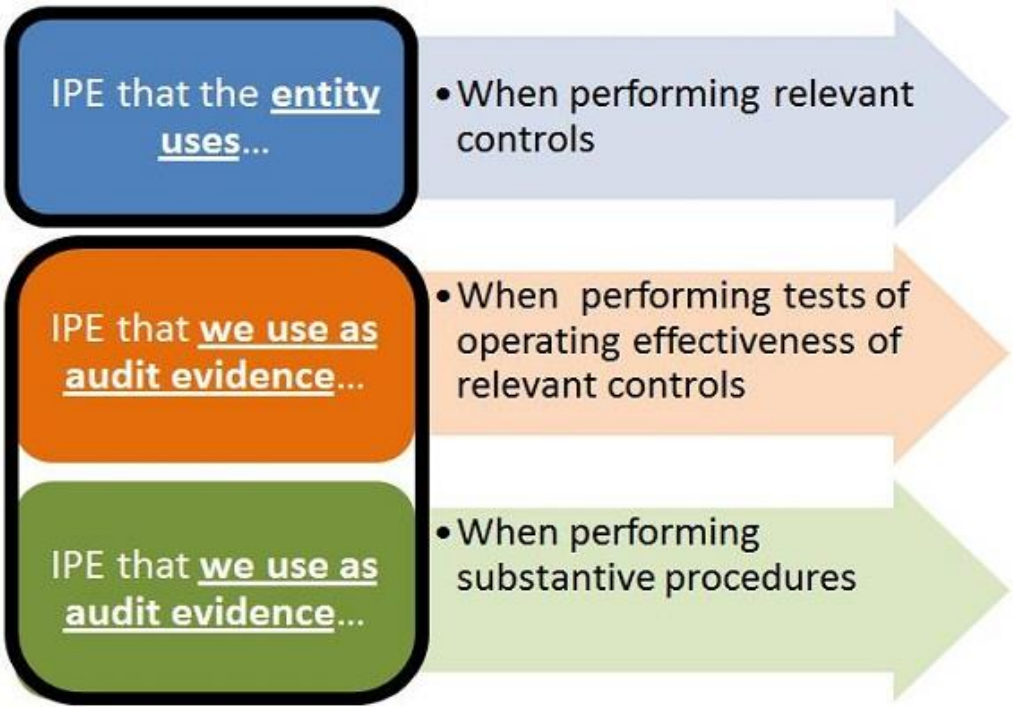
IPE is typically in the form of a "report" which may be either system-generated, manually-prepared, or a combination of both (e.g. a download of system accumulated data that is then manipulated in an Excel spreadsheet). Examples of different forms of reports include:

- Documents prepared by entity personnel including (but not limited to) minutes of board meetings, legal documents, analysis and commentaries, market analysis, competitors analysis.
- Standard "out of the box" or default reports or templates that either:
    - May not be modified and therefore don't allow for customization of inputs/outputs (e.g. a system generated standard A/R aging report with no configurable settings or user optionality, that in today's IT environments of ERP systems is fairly rare), or
    - May be configurable upon installation (e.g. by adding custom fields to a report design or removing fields on a report that you do not want to display) and can be modified thereafter through established program change processes (e.g. a system generated standard A/R aging report with configurable settings such as user defined aging categories and user options for specifying the logic, such as the manner in which the aging is computed, that is more typical in today's IT environments)
- Custom-developed reports that are not standard to the application and that are defined and generated by user-operated tools such as scripts, report writers, programming language and query tools (e.g., a monthly user-initiated extract of inventory sales by location)
- Output from end-user applications such as automated spreadsheets or other similar applications that house and extract relevant information (i.e. data)
- Entity-prepared analyses and schedules that are manually prepared by entity personnel either from information generated from the entity's system or from other internal or external sources.

Note	Consider consultation if you are uncertain whether relevant information that we are using as audit evidence is "IPE."

IPE that is relevant to our audit and used as audit evidence generally falls into one of three “buckets" as depicted in Figure 2.1:

Figure 2.1



2.2 Testing approaches

There are two ways we can test IPE:

- Test the accuracy and completeness of the information ("direct testing approach")
- Test the controls over the accuracy and completeness of that information.

When designing and performing audit procedures, we shall consider the **relevance** and **reliability** of the information to be used as audit evidence. **[ISA 500.7]**

Relevance deals with the logical connection with, or bearing upon, the purpose of the audit procedure and, where appropriate, the assertion under consideration. The relevance of information to be used as audit evidence may be affected by the direction of testing. **[ISA 500.A27]**

Reliability of information to be used as audit evidence, and therefore of the audit evidence itself, is influenced by its source and its nature, and the circumstances under which it is obtained, including the controls over its preparation and maintenance where relevant. **[ISA 500.A31]**

AAM 22500-1.3	When using information produced by the entity, the auditor shall evaluate whether the information is sufficiently reliable for the auditor's purposes, including as necessary in the circumstances: **a.** Obtaining audit evidence about the accuracy and completeness of the information; and **b.** Evaluating whether the information is sufficiently precise and detailed for the auditor's purposes. [ISA (UK and Ireland) 500.9]
AAM 22500-1.4	In order for the auditor to obtain reliable audit evidence, information produced by the entity that is used for performing audit procedures needs to be sufficiently complete and accurate. *For example, the effectiveness of auditing revenue by applying standard prices to records of sales volume is affected by the accuracy of the price information and the completeness and accuracy of the sales volume data. Similarly, if the auditor intends to test a population (for example, payments) for a certain characteristic (for example, authorization), the results of the test will be less reliable if the population from which items are selected for testing is not complete.* [ISA (UK and Ireland) 500.A49]
AAM 22500-1.5	Obtaining audit evidence about the accuracy and completeness of such information may be performed concurrently with the actual audit procedure applied to the information when obtaining such audit evidence is an integral part of the audit procedure itself. In other situations, the auditor may have obtained audit evidence of the accuracy and completeness of such information by testing controls over the preparation and maintenance of the information. In some situations, however, the auditor may determine that additional audit procedures are needed. [ISA (UK and Ireland) 500.A50]
AAM 22500-1.6	In some cases, the auditor may intend to use information produced by the entity for other audit purposes. *For example, the auditor may intend to make use of the entity's performance measures for the purpose of analytical procedures, or to make use of the entity's information produced for monitoring activities, such as reports of the internal audit function.* In such cases, the appropriateness of the audit evidence obtained is affected by whether the information is sufficiently precise or detailed for the auditor's purposes. *For example, performance measures used by management may not be precise enough to detect material misstatements.* [ISA (UK and Ireland) 500.A51]

Figure 2.2 summarizes how IPE that is relevant to our audit may be used and where it is further discussed in the referenced sections.

Figure 2.2

Types of IPE:	IPE Guide Chapter:
When the operating effectiveness of the entity's relevant controls is dependent on IPE as a part of a control-reliance strategy	See section 6
When we use IPE as audit evidence in performing tests of controls	See section 5
When we use IPE as audit evidence when performing substantive procedures	See section 4

3 Understand and evaluate IPE

3.1 Understanding IPE

In order to design appropriate procedures to test the accuracy and completeness of IPE, it is important to first obtain an appropriately detailed understanding of the IPE. We being with a thorough understanding of what the IPE is, how the IPE is generated, and how we intend to use it as audit evidence. This allows us to design the most appropriate testing approach to determine whether the IPE is sufficient and appropriate for purposes of our audit.

Q&A 1	What questions might we consider asking of entity personnel when obtaining an understanding of IPE?

3.1.1 Involvement of an IT Specialist

Based on AAM 13400, Assign engagement teams, the appropriate involvement of an IT specialist in the audit engagement is determined based on a discussion between the engagement partner and an IT specialist. When IPE is system-generated, the involvement of an IT specialist will be helpful in assisting us in obtaining an appropriately detailed understanding of the IPE and also in planning and performing procedures to test the IPE. In addition, an IT specialist can assist with file interrogation techniques (e.g. ACL) or computer-assisted auditing techniques (CAAT) that we might plan to perform to test the IPE.

3.2 Understanding the elements of IPE

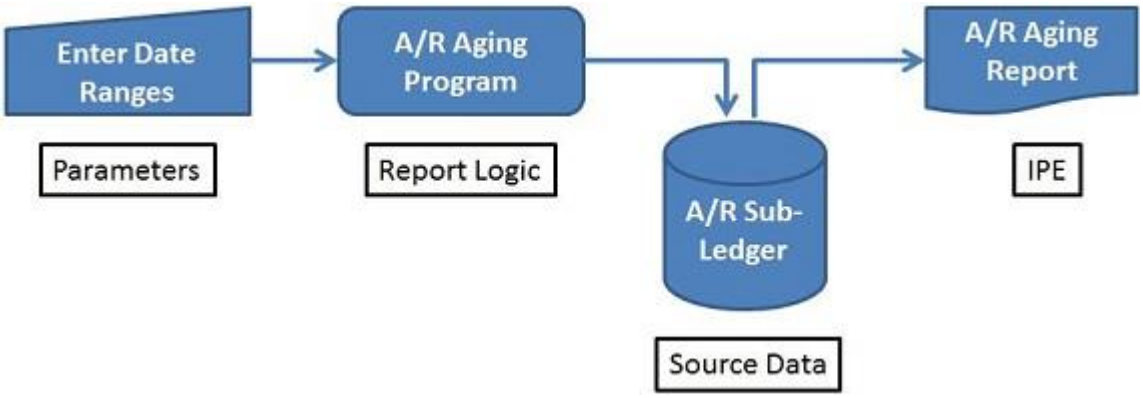
IPE typically consists of three elements: (1) source data, (2) report logic, and (3) parameters.

Accordingly, it is important that we obtain an understanding of each of these three elements to determine our testing strategy for IPE. These three elements are further described as follows:

Element	Description
Source Data	The information from which the IPE is created. This may include data maintained in the IT system (e.g. within an application system or database) or external to the system (e.g. data maintained in an Excel spreadsheet or manually maintained), which may or may not be subject to general IT controls. For example, for a report of all sales greater than £10,000, the source data is the database of all sales transactions.
Report Logic	The computer code, algorithms, or formulas for transforming, extracting or loading the relevant source data and creating the report. Report logic may include standardized report programs, user-operated tools (e.g. query tools and report writers) or Excel spreadsheets, which may or may not be subject to the general IT controls. For example, for the A/R Aging report, the report logic is typically a program in the A/R application that contains the code and algorithms for creating the A/R Aging (report) from the A/R subledger detail (source data).
Report Parameters	Report parameters allow the user to look at only the information that is of interest to them. Common uses of report parameters including defining the report structure, specifying or filtering data used in a report or connecting related reports (data or output) together. Depending on the report structure, report parameters may be created manually by the user (user-entered parameters) or they may be pre-set (there is significant flexibility in the configuration of parameters, depending on the application system), and they may or may not be subject to the general IT controls. For example, for a monthly report of slow moving inventory by warehouse location, the user enters the month and location code parameters to generate the reports.

Figure 3.1 portrays the process and the three elements of IPE to generate a typical A/R aging report: (1) the user-entered parameters (i.e. date ranges), (2) the source data (i.e. the A/R subledger), and (3) the report logic that generates the A/R aging report (which includes both the extraction of the source data from the A/R subledger and the aging of the items).

Figure 3.1



Potential pitfalls Not identifying which elements (e.g., source data, report logic, user-entered parameters) are not subject to the entity's general IT controls (e.g. access or program change controls).

Assuming the name of the report is indicative of the purpose of the report or the data used in the report, and therefore failing to appropriate understand the IPE.

Our objective when we perform procedures on IPE is to determine if these three elements, when applicable, produce IPE that is accurate and complete. As IPE is generated in many different forms and through many different methods, our testing strategy may vary depending on the intended purpose of the IPE, the nature of the IPE (e.g. a standard pre-coded report versus a custom ad-hoc report) and how it is created (e.g. the degree of automation which typically increases reliability when subject to effective general IT controls).

For example, Entity A and Entity B both use the same ERP system; however, Entity A uses an A/R aging report from the system to determine its allowance for doubtful accounts, and Entity B takes the same A/R aging report, downloads it into Excel, and then manually manipulates the report. The downloading and manipulation of Entity B's report likely introduces additional possibilities that the IPE may be inaccurate or incomplete compared to the A/R aging report used by Entity A and therefore, it would likely be necessary to perform of additional procedures on Entity B's report to determine its accuracy and completeness as compared to Entity A's report.

The following considerations relating to what can go wrong with the different elements of IPE may assist us in obtaining the appropriate understanding to plan our testing approach to IPE:

- Not all data is captured (eg. if all revenue transactions are not captured in the system, a report of revenue data that is derived from the system would likely be incomplete)
- The data is input incorrectly (eg. a number that is transposed or entered incorrectly into an Excel spreadsheet may result in incorrect totals in the spreadsheet)
- The report logic is incorrect (eg. a report is designed to include sales transactions for which the variation between the actual selling price of an item and the price of that same item in the entity's standard price list is in excess of 15 percent; however, the report was incorrectly configured to only include transactions for which the variance is in excess of 20 percent.)
- The report logic or source data could be changed inappropriately or without authorization (eg. the report is an Excel spreadsheet that is not subject to general IT controls or otherwise protected and, therefore, may be subject to unauthorized changes)
- The user-entered parameters entered are incorrect (eg. user-entered parameters related to the date range are required when generating an A/R aging report. If the user-entered parameters are not entered correctly, the data on the report will likely not be correct)

Potential pitfall	Failure to obtain a sufficient understanding of the source data, report logic, and parameters of the IPE, particularly system-generated reports (e.g. how the report is developed, which system the report comes from, or how the data is extracted).

3.3 Obtain evidence of the accuracy and completeness of IPE each year

We obtain audit evidence of the accuracy and completeness of IPE *each* year; however, the results from tests performed in our prior audits are considered when designing our tests in the current year.

General IT controls may protect data from unauthorized changes once the data is entered into the system, *but testing of general IT controls alone is not sufficient to test the accuracy and completeness of source data*. Similarly, while general IT controls may prevent unauthorized changes to the report logic, *general IT controls alone do not validate that the report logic is or remains appropriate*.

Potential pitfall	Relying solely on prior-year evidence and therefore, failing to test the accuracy and completeness of IPE in the current year.

4 Testing the accuracy and completeness of IPE that we use when performing substantive procedures

4.1 Testing the accuracy and completeness of IPE that we use when performing substantive procedures

IPE in the context of substantive procedures is IPE that we use as audit evidence when performing or substantive procedures for classes of transactions, account balances, and disclosures; therefore, it is necessary to determine that the IPE is accurate and complete.

For example, we may obtain a property roll-forward schedule (e.g., a summary of general ledger activity) (IPE) that we use as audit evidence (e.g., the starting point to perform our substantive testing of the property account balance). Accordingly, we need to perform procedures to address the accuracy and completeness of the schedule (which is often addressed in whole or in part by our substantive procedures).

For example, we obtain and use a report of sales by location (IPE) as audit evidence to identify slow-moving inventory. Accordingly, we need to perform procedures to address the accuracy and completeness of the report, including the underlying sales by location.

For example, we may obtain and use a report of depreciation expense by asset class (IPE) as audit evidence for purposes of a fixed asset impairment analysis. Accordingly, we need to perform procedures to address the accuracy and completeness of the report.

Note

Performing procedures to address the accuracy and completeness of IPE is not a substitute for performing required tests of controls or substantive procedures for classes of transactions, account balances or disclosures and the relevant assertions.

For example, consider systematically calculated depreciation expense. The calculation of depreciation by the system is an automated control and, therefore, is subjected to control testing when identified as a relevant control. Similarly, the resulting depreciation expense balance is subjected to substantive procedures (e.g., tests of detail or substantive analytical procedures) when identified as a significant account balance. A report that we use as audit evidence to perform our tests of controls or substantive procedures related to depreciation expense is tested for accuracy and completeness to the extent not otherwise addressed by our control or substantive procedures.

However, it would not be appropriate to test the report for accuracy and completeness and conclude that the controls over depreciation are effective and the assertions related to the depreciation account balances were met.

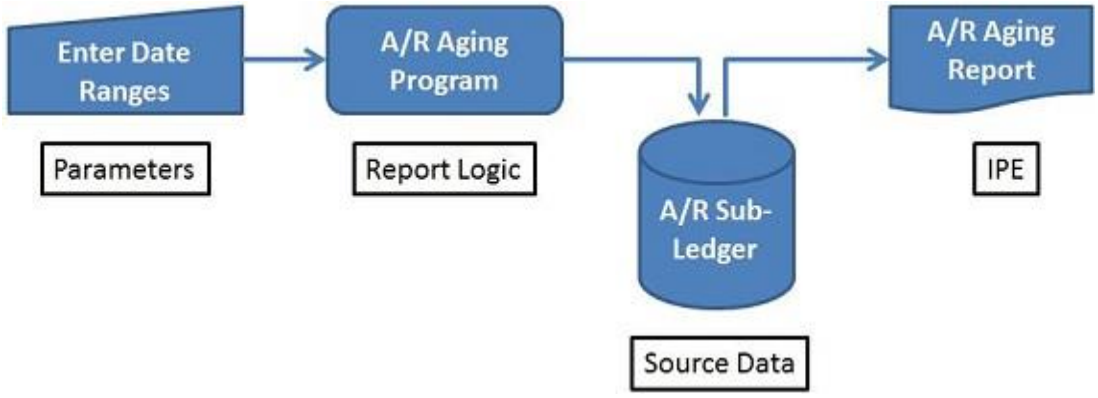
See Appendix B "Illustrative Testing Approaches for IPE for examples of testing approaches for IPE that we use as audit evidence when performing substantive procedures.

4.1.1 Address Each of the Three Elements of IPE, as Applicable

Our test approach will generally consider *each* of the three elements of IPE: (1) source data, (2) report logic, and (3) user-entered parameters, as applicable. Separate procedures or strategies may be necessary for one or more of the elements

For example, consider Figure 4.1, which diagrams the process and elements relevant to the generation of a typical A/R aging report. In this diagram, we need to determine (1) whether the appropriate user-entered parameters were applied, (2) whether the source data in the A/R subledger is accurate and complete and (3) whether the report logic that generates the A/R aging report is appropriate (including the accuracy and completeness of the extraction of the source data from the A/R subledger and determining whether items are being aged appropriately).

Figure 4.1



Potential pitfall

Not identifying IPE that we use as audit evidence in our substantive procedures (e.g. system-generated reports from a financial application or IPE from outside the financial reporting system) and therefore failing to test its accuracy and completeness.

4.1.2 Select the Testing Approach

We may test IPE that we use when performing substantive procedures by either:

1. Performing "direct testing" procedures that address the accuracy and completeness of IPE. For discussion and examples for performing procedures to directly test the accuracy and completeness of IPE, see Chapter 6, "Plan and Perform Direct Testing Procedures."

2. Performing tests of controls that address the accuracy and completeness of IPE.

3. A combination of these approaches (i.e. performing both direct tests and tests of controls to address the accuracy and completeness of IPE).

4.1.3 Address Both Accuracy and Completeness of Source Data

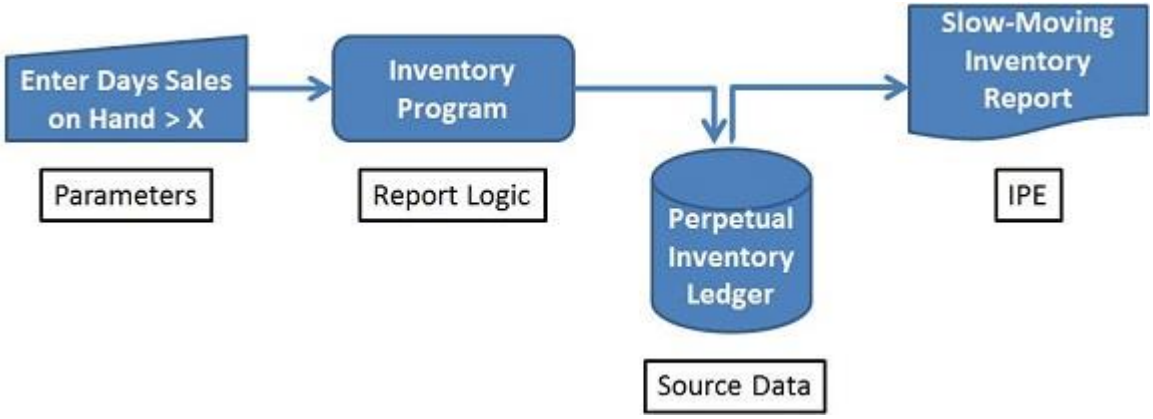
Testing the source data that underpins the IPE (and the extraction of the data into a report) for accuracy and completeness can be done by examining appropriate audit evidence (e.g. invoices, bank statements, or confirmations) or by agreeing the data to other data or reports which have been appropriately tested.

Potential pitfall	Testing accuracy and completeness of source data used to generate IPE by agreeing it to another report or data when the accuracy and completeness of the other report or data has not been tested.

Testing the *accuracy* of a population (source data) is a different objective to testing the completeness of a population, and accordingly, we typically design and perform procedures to test for accuracy and procedures to test for completeness. It is generally not appropriate to select one sample and then "split" the sample size between a test to address accuracy and a test to address completeness of source data. The more appropriate strategy is to design each test to achieve its specified objective, including determining the necessary sample size for each.

For example, consider Figure 4.2. In this case, the objective of the Slow Moving Inventory Report is to identify all inventory items in the perpetual inventory ledger that meet a certain criteria (e.g., days sales on hand exceeds a certain number). Assume that the perpetual inventory ledger (or as applicable, the relevant flows of transactions) has been subjected to appropriate substantive procedures (and tests of relevant controls, as applicable) such that we have concluded that the data in the perpetual inventory ledger is not materially misstated. In this case the Slow Moving Inventory Report is not intended to include all amounts from the perpetual inventory ledger, and therefore, we are unable to compare the totals on the Slow Moving Inventory Report to the totals in the perpetual inventory ledger (an "audited amount") to verify completeness of the extract of data in the Slow Moving Inventory Report. Accordingly, we need to design separate tests of the Slow Moving inventory Report for both accuracy (e.g., select items from the Slow Moving Inventory Report and trace into the perpetual inventory ledger) and for completeness (e.g. select items from the perpetual inventory ledger and trace into the Slow Moving Inventory Report).

Figure 4.2



However, when we have an audited amount to which we can compare the total of the amounts included in the IPE, we can address completeness of the IPE through this comparison and therefore, we may only need to design additional procedures to test the accuracy of the information reflected in the IPE (e.g. by line item as applicable).

For example consider Figure 4.1 again. In this case, the objective of the A/R aging report is to reflect the aging of all the individual accounts included in the A/R subledger. Assume that the A/R subledger has been subjected to appropriate substantive procedures (and tests of relevant controls, as applicable) such that we have concluded that the data in the A/R subledger is not materially misstated. The total of all accounts included in the A/R subledger therefore represents an audited amount to which we can compare the total of the amounts included in the A/R aging report, and in doing so, we can verify the completeness of the A/R aging report. To validate the accuracy of the information included in the A/R aging report at the line-item level, we may select a sample of individual line items from the A/R aging report and trace them to the A/R subledger (or vice versa).

4.2 Using IPE in substantive analytical procedures

When we perform substantive analytical procedures, we may use either externally or internally prepared data. For both externally and internally prepared data, we are required to evaluate the reliability of data from which our expectation of recorded amounts or ratios is developed, taking account of source, comparability, nature and relevance of information available, and controls over preparation.

When internally prepared data is being used by us as audit evidence, we are required to obtain audit evidence about the accuracy and completeness of the information.

Examples of internally prepared data that we often use in substantive analytical procedures are:

- Prior-period data adjusted for change (e.g., comparing to prior year actual operating expenses with an adjustment for a new acquisition)
- Current-period financial data from within the entity (e.g., comparing sales to cost of sales)
- Entity budgets or forecasts (e.g., comparing current-year budgets or long-term forecasts to actual results as part of a goodwill impairment test)
- Nonfinancial data from within the entity (e.g., headcount for payroll expense, weight shipped for freight companies, number of hours worked).

5 Plan and perform tests of IPE that we use when performing tests of operating effectiveness of relevant controls

5.1 Plan and perform tests of IPE that we use when performing tests of operating effectiveness of relevant controls

IPE in the context of *our* internal control testing is IPE that we use as audit evidence to perform our tests of controls and, therefore, we need to perform procedures to determine that the IPE is accurate and complete.

For example, when testing the effectiveness of an entity's program change controls, we may request the entity to provide a system-generated report that identifies the modifications made to a specific application during a specified time period and use such a report to identify and select items for testing of the entity's program change controls. Our testing of change controls relies on the report being accurate and complete; therefore, we need to perform procedures to address the accuracy and completeness of the report.

When we use a report (IPE) to identify the population of items of interest from which to draw our sample for testing, our tests of the items selected from the report typically address the accuracy of the report; however, such procedures often do not address the completeness of the report.

For example, when testing the effectiveness of an entity's program change controls, we obtain a report listing the changes logged during the period of audit interest. When we make selections from that report and test them to determine if the entity's controls over program changes are effective, we are also obtaining evidence of the accuracy of the report. We design and perform other procedures to address the completeness of the report (e.g., we may select program changes that we identified from an independent population and trace them to the report of program changes or we could test the effectiveness of the controls over the completeness of the report of program changes).

5.1.1 Select the Testing Approach

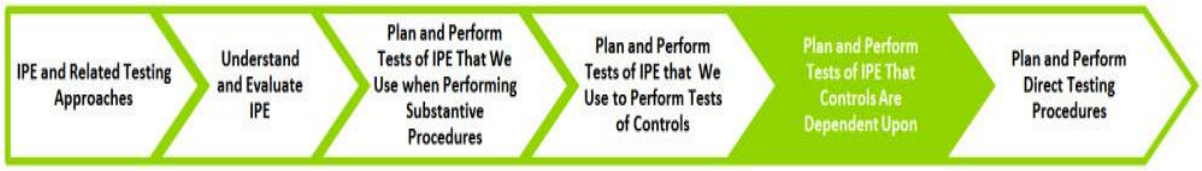
We may test IPE that we use to perform test of controls either:

1. Performing "direct testing" procedures to address the accuracy and completeness of IPE. For discussion and examples when performing procedures to directly test the accuracy and completeness of IPE, refer to Chapter 6, "Plan and Perform Direct Testing Procedures That Address the Accuracy and Completeness of IPE."
2. Perform procedures to test controls that address the accuracy and completeness of the IPE
3. A combination of these approaches (i.e. performing direct testing and tests of controls to address the accuracy and completeness of IPE).

Note	See Appendix C "Illustrative Testing Approaches for IPE Used in Testing Controls," for examples of direct testing of IPE that we use as audit evidence in our tests of controls.

Potential pitfall	Failure to identify as IPE the information that we use to define the population of items of interest from which to draw our sample for tests of controls.

6 Plan and perform procedures that address the accuracy and completeness of IPE that the entity's controls are dependent upon



6.1 Control reliance strategy

When we are testing controls to reduce the extent of our substantive procedures (i.e. taking a control reliance strategy), we are required to test the accuracy and completeness of IPE that a relevant control is dependent upon.

6.1.1 Select the Testing Approach

When the operating effectiveness of the entity's relevant controls is dependent on IPE as a part of a control-reliance strategy, we may test IPE by either:

1. Performing "direct testing" procedures to address the accuracy and completeness of IPE. For discussion and examples when performing procedures to directly test the accuracy and completeness of IPE, refer to Chapter 6, "Plan and Perform Direct Testing Procedures That Address the Accuracy and Completeness of IPE."
2. Perform procedures to test controls that address the accuracy and completeness of the IPE
3. A combination of these approaches (i.e. performing direct testing and tests of controls to address the accuracy and completeness of IPE).

Note	See Appendix C "Illustrative Testing Approaches for IPE Used in Testing Controls," for examples of direct testing of IPE that we use as audit evidence in our tests of controls.

Potential pitfall	Failure to identify all the IPE that an entity's controls are dependent upon.

6.2 Non-control reliance strategy

Although we are not required to test the operating effectiveness of controls when we are not planning on reducing the extent of our substantive procedures (i.e. we are not planning on a control reliance strategy), we may nevertheless identify relevant controls that we are required to understand (i.e. evaluate design and

determine implementation) as part of our planning and risk assessment procedures. If those controls are dependent upon IPE, we consider whether the IPE is sufficiently appropriate and detailed for its intended purpose as part of the evaluation of the design and implementation of the controls, which may include consideration of the accuracy and completeness of the IPE. However, we are not required to perform audit procedures to address the accuracy and completeness of IPE that is used solely for our risk assessment.

7 Plan and perform direct testing procedures that address the accuracy and completeness of IPE

The appropriate procedures and sample size for directly testing IPE is a matter of professional judgment based on the nature of the IPE and may vary depending upon the specific facts and circumstances.

Q&A 2	What are example procedures we may use to directly test the accuracy and completeness of each of the three elements of IPE?

7.1 Considerations when planning our direct testing approach

In order to determine whether "directly" testing IPE is the most effective and efficient testing method, we consider whether and to what extent our tests of controls or substantive procedures address the accuracy or completeness of the IPE

. *For example:*

1. *Consider if the IPE is the starting point of our substantive procedures, and therefore, whether our substantive procedures for testing the relevant assertions for the class of transactions, account balance, or disclosure also address the accuracy and completeness of the three elements of the IPE. In such cases, additional procedures may not be necessary.*

   ***For example**, we may use a property rollforward schedule prepared by the entity as the starting point to perform our substantive testing of the property account balance. Our substantive procedures of the property account balance (either tests of details or substantive analytical procedures) would likely include procedures that would address the accuracy and completeness of the information on the rollforward schedule, such as agreeing totals from the schedule to the beginning and ending general ledger balances, footing the schedule, and making selections from the various totals reflected on the schedule (e.g., additions, disposals, depreciation) to test by agreeing back to source documents or by recalculation. In this case, additional procedures to address the completeness and accuracy of the elements of the IPE are likely not necessary.*

Q&A 3	Is an extract of the general ledger or sub-ledger detail considered IPE?

2. *Consider if the IPE is extracted from data related to classes of transactions, account balances, or disclosures that is already being tested as part of our audit — either by testing the relevant controls or through substantive procedures. If so, we may need to only plan additional testing of the remaining IPE elements (i.e. the report logic and, if applicable, the user-entered parameters).*

For example, we test the relevant controls over sales, billing, and cash receipts, including the relevant general IT controls, for control reliance purposes and our substantive procedures validate that the transaction data in the A/R subledger is accurate and complete and protected from unauthorized access or changes. Accordingly, when testing the A/R aging report which is derived from the A/R subledger detail, we do not need to trace selections back to source documents as we have already determined through our tests of relevant controls that the A/R subledger detail is accurate and complete.

However, even when we may have tested the controls related to the underlying source data or substantively tested the source data, we may still need to perform procedures to address the appropriateness of the report logic and user-entered parameters used in producing the IPE. In some cases, we may be able to use the same items tested (or a subset thereof) for our control tests or substantive procedures to perform procedures specifically directed at the accuracy and completeness of the process to extract the relevant data into the report.

For example, although we have already determined through our tests of relevant controls that the A/R subledger detail is complete and accurate, we still need to perform procedures to address the appropriateness of the report logic. Therefore, to validate that the data in the A/R aging report was properly extracted, we may reconcile the A/R aging report to the A/R subledger in the aggregate and then trace into the A/R aging report the relevant information for the items (or subset thereof) that were selected for A/R confirmations.

Potential pitfall	Not specifically considering whether the accuracy and completeness of IPE is addressed as part of our already-planned audit procedures (e.g., substantive procedures or tests of controls), resulting in duplicate or unnecessary procedures performed.

3. Consider if the IPE consists of source data that may be tested for accuracy and completeness in conjunction with our other tests of controls or substantive procedures for the relevant flows of transactions.

For example, when performing substantive test of sales transactions we may also include testing that the product codes/locations were properly coded and input into the system in order to validate that the data at the sales by product code/location is accurate and complete.

For example, when performing tests of controls, we may also assess whether the identified controls specifically address the recording and reporting of revenue and expenses by location.

Potential pitfall	Inappropriately relying on our substantive procedures or tests of controls which did not address all of the relevant aspects of the source data used in the IPE (e.g. the location of an expense or coding of sales by location).

7.2 Sample sizes

In determining the sample size for directly testing IPE, we consider two "dimensions:" the number of "instances" of IPE to test and then the number of items to test within each IPE instance.

1. The Number of Instances to Test

Each time we use a report (IPE) in a test of controls or in substantive procedures, is an "instance" and, therefore, we test each instance of the IPE we use unless the IPE is system-generated and subject to effective general IT controls.

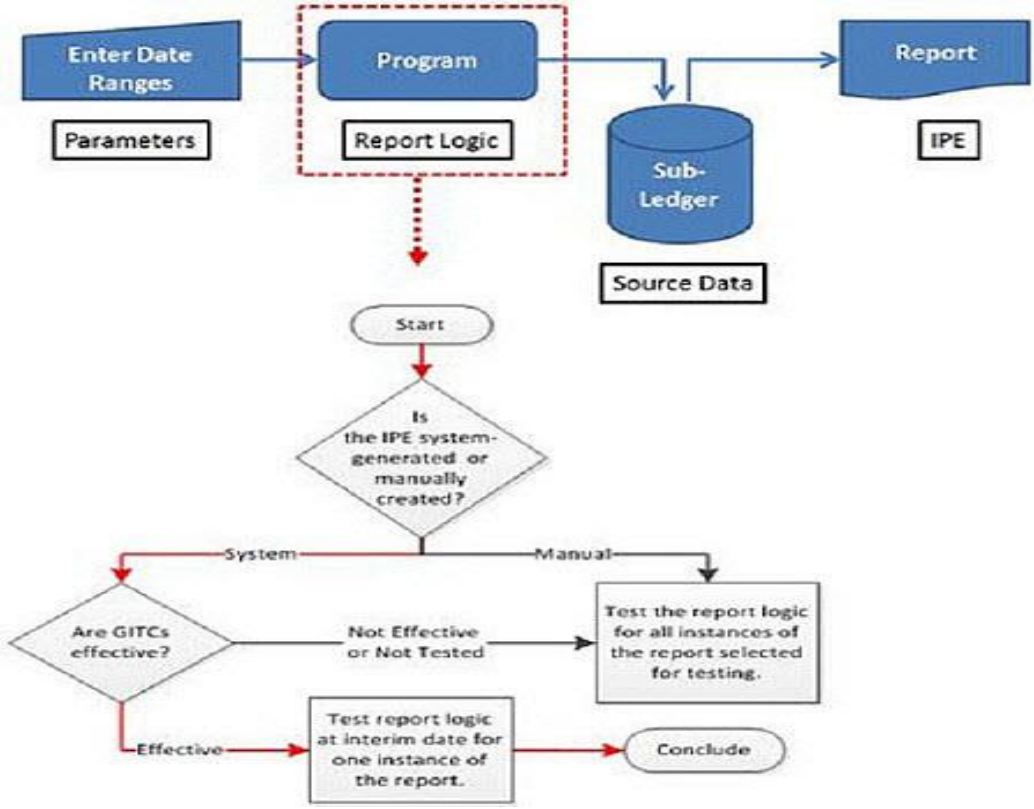
For example, we are using a manually-prepared property rollforward schedule to test property. We obtain the schedule in September to perform our interim substantive procedures (which may be tests of details) and in December to perform our year-end substantive procedures (which is also tests of details). Therefore, there are two instances of IPE (i.e. the schedule) that we are using.

For example, we obtain a download of investment activity for the year for purposes of making selections to test the operating effectiveness of a control over the authorization of purchases and sales. This represents one instance of IPE; however, if we obtained a report at an interim date and then another for the roll-forward period, this represents two instances of IPE that we are using.

When the IPE is system-generated and the related general IT controls have been tested and found to be operating effectively, the approach to determining the number of instances to test the IPE elements that are subject to general IT controls (e.g. typically the report logic) is similar to the approach for determining the sample size to test an automated control (i.e. testing the report logic for one instance of the report may be sufficient because the general IT controls prevent unauthorized changes to the report logic). However, this approach would generally not apply to user-entered parameters that are input manually or the integrity and reliability of the source data before it enters the IT system and becomes subject to the general IT controls.

For example, we are using an instance of a particular system-generated report for our substantive testing at interim and then again at year-end (Figure 7.1). We determined that the access and program change controls over the report logic and source data are effective. In this case, we may test all three elements of the IPE at the interim date, but we do not need to retest the report logic at year-end since it is subject to effective general IT controls. However, we do consider what additional procedures are necessary with respect to the source data (e.g. which may be addressed by testing the relevant controls over the processing and maintenance of the source data or by directly testing the source data) and the user-entered parameters.

Figure 7.1



When general IT controls are not effective, we consider the implications of the ineffective general IT controls on our control and substantive procedures (e.g., the source data the entity relies on related to transactions or other data that are initiated, authorized, recorded, processed, or reported through the system) and any reports produced by the IT systems affected by the ineffective general IT controls and adjust our planned procedures accordingly.

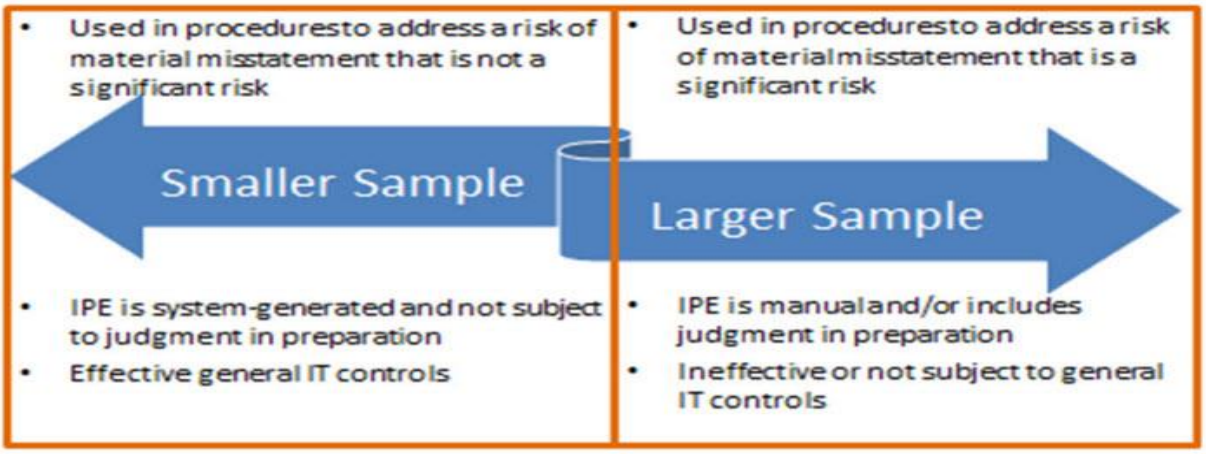
Potential pitfalls	Incorrectly assuming that each of the three elements of the IPE is addressed by the entity's general IT controls. Inappropriately reducing the number of instances of IPE to test when general IT controls are ineffective.

2. The Number of Items to Test for Each Instance of IPE:

   The number of items we select to test for each instance of the IPE is based on auditor professional judgment considering the nature of the IPE (see Figure 7.2) such as whether:

   - The IPE is used to perform procedures to address a risk of material misstatement that is a significant risk
   - The IPE is system-generated or manually prepared
   - The IPE is subject to effective general IT controls
   - Significant judgment is involved in the preparation of the IPE.

Figure 7.2



While we are not required to use a statistically based approach to test IPE, we may consider the sample size tables in Figure 7.3 which demonstrates how we may determine the number of items on a report to test) to provide a frame of reference that may assist us in judgmentally determining an appropriate sample size of items on a report/IPE to test. **Therefore, for the purposes of performing procedures to address the accuracy and completeness of IPE, the sample sizes in the tables are not minimums or maximums; rather, they are simply data points for consideration.**

Where we are directly testing aspects of IPE used in substantive testing, we normally seek to incorporate consideration of the completeness and accuracy of relevant IPE in the design of our substantive procedure. Therefore, sample sizes for direct testing of IPE used in substantive testing will generally be limited to the lower of the sample size in Figure 7.3 and the sample size used for the substantive test itself.

Furthermore, if we have tested general IT controls and found them to be effective, depending on the nature of the information produced by the entity and whether the general IT controls are relevant in addressing the completeness and accuracy of such information produced by the entity, it may be appropriate to use the sample size related to testing an automated control (i.e. a minimum sample size of one).

Figure 7.3

Population of Report	Number of selections			
	IPE relates to a testing of a significant risk		IPE relates to testing of a normal risk	
	Normal extent of testing	Low extent of testing*	Normal extent of testing	Low extent of testing*
Over 1,000	45	25	25	12
200-300	25	15	15	7
52	8	5	5	2
12	3	2	2	1
4	2	1	1	1
1	1	1	1	1
GITCs over the system used to produce the IPE fully address completeness and accuracy	1	1	1	1

*** Low extent of testing**

When directly testing IPE for completeness and accuracy for IPE, the number of items in the report can be determined by reference from the 'lower extent of testing column' if all the following characteristics are present for either normal or significant risks:

- during the engagement team's discussion of the susceptibility of the entity's financial statements to material misstatement due to fraud, no risk factors associated with, or relevant to the IPE were identified;
- no errors were identified in the preparation of the corresponding IPE during the audit of the preceding period;
- the parameters for the IPE are simple and explicitly stated within the IPE and can be understood and the completeness and accuracy of the IPE can be tested without the need to extend our work to understanding how the parameters interact with the system generating the IPE[1];
- the report logic of the IPE is simple and the logic used is explicit within the IPE or can easily be deduced and re-performed without the need extend our work beyond the IPE to the coding constituting the report logic[2]; and
- the source data from which the IPE is generated is not subject to manual intervention or judgemental selection as part of the preparation of the IPE.

[1] An example of IPE with simple parameters might be an analysis of invoices posted within a particular date range, where that range is explicitly stated in the IPE.

[2] An example of simple report logic would be a hard copy report that documents a stock valuation but explicitly shows the quantity and price of the relevant of the stock item enabling the re-performance of the valuation calculation. Another example might be a spreadsheet supporting a general provision against items of a particular age where we the formulae in the spreadsheet are readily understandable through observation.

When testing IPE that includes a smaller population (e.g. fewer line items on a report), the sample size tables above may not be as relevant, and therefore, we use judgment when determining the appropriate sample size.

Potential pitfalls	For each instance of IPE selected for testing, defaulting to a very small sample size (e.g. a "test of one") is generally not sufficient.
	Inappropriately allocating the sample size across instances of IPE that are required to be tested (e.g. spreading a sample of 25 items across the two instances of IPE that are required to be tested).
	Inappropriately allocating the sample size between (1) procedures performed to address accuracy and (2) procedures performed to address completeness of the IPE.

Appendix A: IPE Q&As

Q&A 1 - Obtaining and understanding IPE

Question:

What questions might we consider asking of entity personnel when obtaining an understanding of IPE?

Answer:

The following questions may assist us in obtaining an understanding of IPE:

1. What is the purpose of the IPE?
    a. If in connection with the operation of a control, does the user depend on the accuracy and completeness of the information? If not, how is the user able to validate that the information is accurate and complete?
2. What is the nature of the IPE?
    a. Is it a standard or custom report?
    b. Is the IPE system-generated or manually created? If manually created, what is the process for creating it?
3. How is it created?
    a. What is the relevant source data and where does the source date reside? Is the source data subject to the general IT controls (e.g., access controls)?
    b. Where does the report logic reside? If system-generated, is the report logic subject to the general IT controls (e.g. access and program change controls)?
    c. Is the report generated through a report writer tool? Is the report writer tool subject to the general IT controls (e.g. access and program change controls)?
    d. What functions are being performed by the report logic, including:
        i. How is the data extracted, transformed or loaded
        ii. Are algorithms or calculations performed on the source data
        iii. Is the information further manipulated after the IPE is generated by the system
        iv. Is there additional information that is manually added to the report?
    e. Does the user enter parameters when the IPE is generated? If so what are the user-entered parameters?
4. Have any errors been identified in the IPE? If so, what type of errors?

Q&A 2 - Directly Testing

Question:

What are example procedures we may use to directly test the accuracy and completeness of each of the three elements of IPE?

Answer:

The nature of direct tests over IPE is highly dependent on the nature of the IPE. Examples of such tests for each of the 3 elements include:

Source data:

- Select a sample of items from the report and agree to relevant information in the system (if audited) or back to the appropriate source documentation as appropriate (accuracy).
- Make a sample selection from the source documentation (or from a system if audited) and agree to relevant information on the report (completeness).
- Reconcile report totals to source data totals, as applicable.

Report logic:

- Cast and cross-cast the report and verify report logic on a sample basis (including formulas for extracting the relevant source data, creating the report, and executing computations within the report, as applicable).
- Independently recreate the report and related algorithms (e.g. using ACL or by involving exploratory data analysis specialists).

User-Entered Parameters:

- Directly test the appropriateness of user-entered parameters or thresholds used to generate report (e.g., by observing entity personnel input the user-entered parameters; by reviewing the user-entered parameters depicted on the report; or by comparing the IPE to relevant information in the system). Some report user-entered parameters are, by their nature, entered each time a report is generated.

Q&A 3 - General Ledger Balances

Question:

Is an extract of the general ledger or sub-ledger detail considered IPE?

Answer:

An extract of the general ledger or sub-ledger detail generally would be IPE, although the transactions (source data) that comprise the sub-ledger or general ledger detail for a significant account often may already be tested for accuracy and completeness through our control or substantive testing procedures.

For example, if we obtain an extract of the fixed asset additions detail from the PP&E sub-ledger, the report itself is IPE. Accordingly, we verify the mathematical accuracy of the report and reconcile it to the general ledger. Our tests of controls and substantive tests of fixed asset additions validates the accuracy and completeness of the source data that resides in the PP&E sub-ledger which the fixed asset additions detail report is derived from. Accordingly, no additional procedures would be necessary.

However, it is important to carefully consider whether our tests of controls or substantive procedures have, in fact, specifically tested the data that has been extracted from the sub-ledger or general ledger and used in the IPE.

For example, in addition to the customer name and account balance (which are typically addressed by our substantive test), the A/R aging report also depends on the reliability of the invoice or payment date information used to age invoices and receipts and which may not be explicitly addressed in our control or substantive tests.

Appendix B: Illustrative testing approaches for IPE that we use as audit evidence when performing substantive procedures

The examples included below are in the context of IPE used as audit evidence when performing substantive procedures (Section 4 of the IPE guide), demonstrating both tests of controls and direct testing approaches. These illustrate various testing approaches that may be appropriate based on the hypothetical fact patterns. The determination of the appropriate approach and modifications, if any, are necessary in a specific situation are matters of professional judgment based on the specific facts and circumstances.

Note: Refer to Appendix C for examples in the context of IPE that we use when performing tests of operating effectiveness of relevant controls (Section 5) and Procedures that address the accuracy and completeness of IPE that the entity's controls are dependent upon (Section 6).

Data/Report Description	Accounts Receivable (A/R) Aging Report
Background	We use the A/R aging report as audit evidence to support our conclusions about the adequacy of the bad debt reserve in a non-integrated audit. As we are not taking a control-reliance strategy related to the bad debt reserve, we are not required to test controls that address the accuracy and completeness of the A/R Aging report (note that in an integrated audit, typically the controls that address the risks related to the bad debt reserve are dependent upon the A/R Aging report in which case we are required to test the controls that address the accuracy and completeness of such report). It is a standard system-generated report from the application system that required configuration upon initial installation (and therefore can be modified in the future by the entity). The data and report are subject to general IT controls (e.g., access and program change controls) which were tested and concluded to be effective. The user-entered parameters are reviewed by the user of the report for appropriateness.
Testing Approach 1 *Test controls over accuracy*	*Test controls over accuracy and completeness of source data*: Test the relevant controls over the accuracy and completeness related to recording of sales, credit memos, and cash receipts that explicitly address

and completeness of IPE	all the relevant data such as the customer, amounts and transaction date. *Test controls over creation and modification of report logic and user-entered parameters*: Re-perform the automation of the report logic by: • Reconciling the A/R Aging Report to the A/R subledger to verify it agrees in total (completeness of the data extraction) • Selecting one line item from the A/R Aging Report and agree the details back to the data in the A/R Subledger (accuracy of the data extraction) • Verifying the mathematical accuracy for each important calculation, considering variations (e.g., aging bucket and transaction types such as cash receipts, invoices, credits) to determine that each item is properly aged on the report. • Test the relevant general IT controls. Reperform the review performed by the user of the user-entered parameters.
Testing Approach 2 *Directly test accuracy and completeness of IPE*	*Directly test accuracy and completeness of source data*: Reconcile A/R aging report totals to accounts receivables sub-ledger and foot and cross-foot totals. Select a sample of *X* items from the A/R confirmation selections (which were selected from the A/R sub-ledger) and trace them into the A/R aging report. Test the accuracy and completeness of a sample of other transactions (e.g., unapplied cash receipts and credits, if material). *Directly test report logic and user-entered parameters*: Select a sample of *one* of each important calculation addressing any significant variations (e.g., aging bucket and transaction types such as cash receipts, invoices, credits) and determine that each item is properly aged in the report. Test the appropriate input of user-entered parameters or thresholds. Test the appropriate input of user-entered parameters or thresholds.
Testing Approach 3 *Test controls over the accuracy and completeness of source data and directly test report logic and user-entered parameters*	*Test controls over accuracy and completeness of source data*: Test the relevant controls over the accuracy and completeness related to recording of sales, credit memos, and cash receipts that explicitly address all the relevant data such as the customer, amounts and transaction date. *Directly test report logic and user-entered parameters*: Reconcile A/R aging report totals to accounts receivables sub-ledger and foot and cross-

	foot totals. Select a sample of one of each important calculation addressing any significant variations (e.g. aging bucket and transaction types such as cash receipts, invoices, and credits) and determine that each item is properly aged in the report. Test the appropriate input of user-entered parameters or thresholds. Test the appropriate input of user-entered parameters or thresholds.
Testing Approach 4 *Directly test the accuracy and completeness of source data and test controls over the report logic and user entered parameters*	*Directly test accuracy and completeness of source data*: Reconcile A/R aging report totals to accounts receivables sub-ledger and foot and cross-foot totals. Select a sample of *X* items from the A/R confirmation selections (which were selected from the A/R sub-ledger) and trace them into the A/R aging report. Test the accuracy and completeness of a sample of other transactions (e.g., unapplied cash receipts and credits, if material). *Test controls over creation and modification of report logic and user-entered parameters*: Reperform the automation of the report logic by: • Reconciling the A/R Aging Report to the A/R Subledger to verify it agrees in total (completeness of the data extraction) • Selecting one line item from the A/R Aging Report and agree the details back to the data in the A/R Subledger (accuracy of the data extraction) • Verifying the mathematical accuracy for each important calculation, considering variations (e.g. aging bucket and transaction types such as cash receipts, invoices, credits) to determine that each item is properly aged in the report. Reperform the review performed by the user of the user-entered parameters.

Appendix C: Illustrative testing approaches for IPE used in testing controls

The following Appendix provides illustrative testing approaches (principally when performing tests of general IT controls) for IPE that we use as audit evidence when performing tests of operating effectiveness of relevant controls.

When IPE is obtained for our use when testing general IT controls (e.g. to identify the population of transactions or items subject to testing), it is common to obtain audit evidence about the accuracy and completeness of such information concurrently with the actual audit procedure applied to the information (i.e. test the information directly); *for example, our testing of the items that we select from the IPE often provides evidence as to the accuracy of the population; and therefore we may need to only perform incremental procedures to address completeness).*

While the examples that follow primarily demonstrate direct tests of IPE, we may also obtain audit evidence about the accuracy and completeness of IPE by testing controls, if such controls exist.

When we directly test IPE, we may observe the generation of the IPE first-hand when performing our audit procedures. Alternatively, we may obtain the IPE from entity personnel after the fact. In both cases, we need to perform sufficient procedures to determine that the IPE was generated appropriately and that the IPE is accurate and complete; *for example, reviewing the user-entered parameters input for appropriateness and comparing the IPE on a sample basis to relevant information in the system (and vice versa from the system to the IPE).*

Where a sample of items is to be selected (indicated by “X” in the examples below) in a direct test, the number of items to be selected is determined based on professional judgment.

Example 1	
Data/Report Description	Terminated Employee Listing
Background	The Terminated Employee Listing is a standard parameter-driven report generated directly from the HR application and provided to us. The report pulls the names of employees terminated during a particular date range (i.e., the period under audit), as well as other pertinent information about the employees, such as their employee IDs

	and the effective dates of their separations from the entity. This report will be used to determine whether there are active user accounts in the system for any of the terminated employees in order to test GITCs related to timely deactivation and/or removal of user accounts when employees terminate employment with the entity.
Example Testing Approach	Compare the Terminated Employee Listing on a sample basis to relevant information in the system, and vice versa, to determine that: 1. The report was created from the appropriate production system during the period under audit. 2. The appropriate user-entered parameters were used to generate the report (e.g. date range). 3. The employee information in the system is consistent with that in the report. Obtain additional audit evidence that the report accurately includes a complete population of terminations that occurred during the period under audit: • *For example, inquire of entity personnel to obtain the names of X individuals who were terminated in the period under audit and the timeframe during which these individuals were terminated (e.g., if we know the entity did layoffs at a certain time during the year). Inspect the Terminated Employee Listing to determine that the individuals identified during our inquiries appear on the list and the termination dates on the listing are consistent with those communicated to us during our inquiries.* *For example, make a selection of terminated employees from the source where termination status is maintained and validate that the terminated employees appear on the Terminated Employee Listing.*
Example 2	
Data/Report Description	Application User Listing
Background	The Application User Listing is a standard parameter-driven report that is generated directly from the application and provided to us. The report consists of a listing of all users with access to the application system as of the date on which the report was run (i.e., all users with active user accounts in the application system), as well as other pertinent information about the users, such as their user names and the profiles or assigned roles (which determine the access privileges assigned to the users). This report will be used to identify users who are assigned certain access privileges that are relevant to our audit so that we may perform tests to determine whether such access is authorized and appropriate based upon the users' job responsibilities.

Example Testing Approach	Compare the report on a sample basis to relevant information in the system and vice versa to determine that: 1. The report was created from the appropriate production system during the period under audit. 2. The appropriate user-entered parameters were used to generate the report (e.g., date range). 3. The user information in the system is consistent with that in the report. Obtain additional audit evidence that the report accurately includes all users with associated system access*. For example, obtain an understanding of individuals who require access to the application system to perform their job functions. This understanding may be obtained while we are performing various other audit procedures throughout the audit, such as inquiry with entity personnel, inspection of organizational charts/Outlook directories/telephone directories, and observation of entity personnel performing their job functions. Select X individuals who require access to the application and compare to the Application User Listing to determine whether they appear as active users on the list to test the report for omissions (completeness).* Note: We typically test the report for accuracy in conjunction with our test of the control (e.g., select X number of users from the report to assess whether their access is appropriate).
Example 3	
Data/Report Description	System Report with Directory/File Permissions
Background	The Directory/File Permission report is **a standard report that is generated directly from the operating system** and provided to us. This report includes the access rights or permissions (e.g., read, write, execute) for certain sensitive files and directories that we have identified on the UNIX server. We supplied a list of the sensitive files and directories included in the scope of our audit to the UNIX administrator to include in the user-entered parameters when he/she generated the report. Our GITC testing will include determining whether access to these files and directories is appropriate.
Example Testing Approach	Compare the report on a sample basis to relevant information in the system and vice versa to determine that: 1. The report was created from the relevant server during the period under audit. 2. The appropriate user-entered parameters were used to generate the report (e.g., all of the directories and files we requested are included in the report).

	3. The directory/file permissions in the system are consistent with those in the report. The report was not filtered to exclude any users or groups granted access.
Example 4	
Data/Report Description	Password Configuration Report
Background	The SETROPTS Password Configuration Report is a standard report delivered with the RACF security package that was generated directly from the security package and provided to us. The SETROPTS report lists the password settings (e.g., minimum password length, password change interval, number of invalid attempts before lockout) in place for the financial application and supporting GITCs and we will use the report to determine whether these settings are appropriate and configured in accordance with the entity's security policies.
Example Testing Approach	Compare the report on a sample basis to relevant information in the system and vice versa to determine that: 1. The report was generated from the relevant mainframe system during the period under audit. The password settings in the system are consistent with those in the report.
Example 5	
Data/Report Description	Data Center Access List
Background	The Data Center Access List is a standard parameter-driven report that was generated directly from the Company's badge system (which is not subject to GITCs) by the Facilities Manager and provided to us. The Data Center Access List consists of a list of users with access (i.e., via key card) to the entity's data center, including employee name and ID number.
Example Testing Approach	Compare the report on a sample basis to relevant information in the system and vice versa to determine that: 1. The appropriate user-entered parameters were used to generate the report. 2. The data center access information in the system is consistent with that in the report.

	3. All doors with access to the data center are reflected on the report. Obtain additional audit evidence that the report accurately includes all users with data center access. *For example, obtain an understanding of individuals who require access to the data center to perform their job functions. This may be obtained through a variety of sources, such as discussions with entity personnel and inspecting organizational charts/Outlook directories/telephone directories for employees in the IT department. Select X users and cross-reference to the data center access listing to determine that they are properly included on the list to test the report for omissions.*
Example 6	
Data/Report Description	Listing of Application Changes (System-Generated)
Background	This system-generated Listing of Application Changes is **a standard parameter-driven report that is generated directly from the change control tool** and provided to us. The system is configured such that all changes implemented into production are automatically captured on the System Change Log (from which this report is generated) and therefore changes cannot be made to the system without being tracked on the system change log. The report consists of a list of all changes implemented into the production environment during the period under audit, as well as other pertinent information about each change, including a description of the change, the files affected, the date on which the change was implemented, and the user ID of the person implementing the change. This report will be used to establish the population of all changes made to the production system, and we will select a sample of changes from this report to test the operating effectiveness of the entity's application change controls.
Example Testing Approach	Compare the report on a sample basis to relevant information in the system and vice versa to determine that: 1. The report was created from the appropriate production system during the period under audit. 2. The appropriate user-entered parameters (e.g. application module, date range) were used to generate the report. 3. The changes in the system are consistent with those in the report. Obtain additional audit evidence that the report accurately includes all application system changes. *For example, obtain evidence that all changes implemented into production are automatically captured on the System Change Log (from which this report is generated) and therefore changes cannot be made to the system without being tracked on the system change log. Another approach may be to obtain an understanding of the changes implemented by the entity during the period under*

	audit. This understanding may be obtained by both the audit team and IT Specialist through a variety of procedures, such as updating our understanding of the processes, inquiry with IT personnel and inspection of documentation (e.g., IT plans, change control meeting minutes, presentations to management on planned application changes). Select X changes and cross-reference to the change listing to determine whether the changes appear on the listing and the descriptions and dates of the changes are consistent with the information on the change listing.
Example 7	
Data/Report Description	System Change Log (Nonsystem Generated)
Background	The System Change Log is generated from the Remedy ticketing system (which is not subject to GITCs) and includes application, database, and operating system changes. Changes are manually entered into the ticketing system by related administrators and the information is tracked and monitored by the Change Management Team. The report consists of a list of changes implemented into the production environment during the period under audit, as well as other pertinent information about each change, including a description of the change, the date on which the change was implemented, the person implementing the change, and the type of change (e.g., scheduled, emergency). This report will be used to establish the population of changes made to the production system, and we will select a sample of changes from this report to test the operating effectiveness of the entity's change controls.

Example Testing Approach	This report is not generated directly from the system; therefore, a combination of testing approaches may be applied to obtain sufficient audit evidence that the report accurately includes all system changes. For example:
	• *Obtain an understanding of the frequency of system changes implemented by the entity. Inspect the report to determine if the number of changes is consistent with our understanding of the entity's system development/maintenance policy, discussions with IT personnel, and other knowledge that we may have obtained (e.g., if the entity is using a common ERP package, we may be familiar with how frequently the vendor issues service packs).*
	• *Inspect the System Change Log to determine the following:*
	  • *All relevant technology elements (e.g., application, database, operating system) are represented in the listing.*
	  • *All change types (e.g. patches, upgrades, configurations, reports, code, and data) are represented in the listing.*
	  • *Whether there appear to be any gaps (e.g., if the entity's year end is*

	December 31 and we are performing our interim testing as of September 30, we may confirm that the report includes changes with dates ranging from January through September of the year). *Perform one of the following:* • *Obtain a screenshot that contains the dates on which the source code was compiled or the last modified date of production application objects or executables. Select X changes made during the period under audit and validate that these changes appear on the change log and the information reflected on the log is accurate (include a description of the change, date the change was implemented into production etc.).* Obtain audit evidence of specific changes implemented by the entity during the period under audit through procedures, such as inquiry with IT personnel and inspection of documentation (e.g., IT plans, change control meeting minutes, presentations to management on planned changes). Select *X* changes implemented by the entity and cross-reference to the change log to determine whether the changes appear on the listing and the descriptions and dates of the changes are consistent with our understanding.