Foreign Currency-Related Translation Complexities in Cross-Border Healthcare Applications

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Abstract. International cross-border private hospital chains need to apply the standards for foreign currency translation in order to consolidate the balance sheet and income statements. This not only exposes such chains to exchange rate fluctuations in different ways, but also creates added requirements for enterprise-level IT systems especially when they produce parameters which are used to measure the financial and operational performance of the foreign subsidiary or the parent hospital. Such systems would need to come to terms with the complexities involved in such currency-related translations in order to provide the correct data for performance benchmarking.

Keywords. cross-border applications, international hospital chains, healthcare performance parameters, enterprise-level IT system requirements, healthcare finance, healthcare economics

1. Introduction

The era of international cross-border private hospital chains has dawned since a while; however, their expansion across the borders within Europe and elsewhere has taken some gigantic proportions within the last years. The deficit in healthcare services across various European countries has only fuelled this phenomenon and despite the debate on the ethical aspects of this phenomenon, these chains are present and would be there or rather expanding in the near future [1, 2]. This also goes onto say that enterprise-level IT systems need to deal with these developments from various aspects – starting from patient data security to electronic EHR models, national legal issues, systemic diversities within national healthcare delivery structures, to foreign currency translation based complexities towards measurement of performance.

Of course, with the expansion of the Eurozone, such complexities will occur less and less within the Eurozone. However, the expansion of the zone has been slow compared to the original plan and the expansion will not alleviate the complexities when non-Eurozone hospital chains expand within the Eurozone and vice versa.

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Hygeia Diagnostics in Greece have expanded or announced its expansion to Turkey, Romania, Cyprus, Albania and Bulgaria [3–5]. Medi-Clinic Corp. Ltd., South Africa’s third-largest hospital chain, acquired private equity-owned Swiss peer Klinik Hirslanden AG for Sfr2.85 billion ($2.36 billion) [6, 7]. Apollo Hospital of India is in talks with private equity partners in pursuit of a UK-based hospital chain [8]. Asklepios hospital chain operates or holds equity in over 100 hospitals based out of Germany, Greece, Portugal, Poland, Russia, Romania, China and the USA [9].

Such expansions, mergers and acquisitions raise interesting issues in relation to the various kinds of ownership structures and related foreign currency translation issues. Some of the accounting software like Axapta, ACCPAC, MAS 500, Microsoft Enterprise 7.0, Epicor eFinancials, SAP accelerated financials R/3, Solomon IV 5.0 etc. have inbuilt features to be able to execute foreign currency translations. However given that they are not integrated to the enterprise-level IT systems to the extent that a deeper analysis of DRGs, case-mix, financial ratio, operational indicators can take place.

Thus it will be necessary that enterprise-level healthcare IT systems are able to comprehend the various ownership structures and the related complexity to provide automated methodologies to be able to calculate the intrinsic foreign currency translations.

2. FASB and IASB

The Financial Accounting Foundation (FAF), organized in 1972 in the USA, is the independent, private-sector organization with responsibility for the oversight, administration, and finances of the Financial Accounting Standards Board (FASB), the Governmental Accounting Standards Board (GASB), and their advisory councils, the Financial Accounting Standards Advisory Council (FASAC) and the Governmental Accounting Standards Advisory Council (GASAC). FASB is a private, not-for-profit organization whose primary purpose is to develop generally accepted accounting principles (GAAP) within the United States in the public’s interest. The Securities and Exchange Commission (SEC) designated the FASB as the organization responsible for setting accounting standards for public companies in the U.S. [10, 11].

The International Accounting Standards Board (IASB) founded on April 1, 2001 is an independent, privately-funded accounting standard-setter based in London, UK. It is responsible for developing the International Financial Reporting, and promoting the use and application of these standards [12, 13].

FASB and IASB are working on synchronizing their standards in many different aspects of accounting and finance that includes the foreign currency translation standards. However there are differences between the standards (called SFAS by FASB and IFRS by IASB) and various hospital chains, depending on their country of origin use different standards. An enterprise-level healthcare IT system, thus, needs to incorporate these differences within them. Lack of such a model with the systems would mean that the financial and operational performance parameters would be measured inaccurately among the various hospitals belonging to the chain.
3. Translation Rules

3.1. IAS 21 and SFAS 52

IAS 21 from IFRS and SFAS 52 from FASB have established similar rules for foreign currency statement translation [14, 15]. The main issues which need to be determined is the exchange rate which needs to be considered while doing the currency translation and where should that translation be reflected within the consolidated financial statements. The financial data which are influenced originate either from the income statement or from the balance sheet.

Balance sheet parameters primarily influenced include the assets, liabilities and equity – both current assets and liabilities (cash, account receivable etc. for assets and account payable for liabilities) and long-term assets and liabilities (long-term assets like plant, land etc. and long-term liabilities like long-term debt). While the shareholder equity still remains the same, the residual income varies with the currency translation and that needs to be taken into account. Income statement parameters primarily influenced include revenue, cost of goods sold, operative income, and so on.

3.2. Presentation Currency and Functional Currency

The currency in which the foreign currency amounts are presented is known as the presentation currency. Usually it is the currency of the country where the original company, in this case the hospital chain, is located.

Functional currency is the currency of the primary economic environment in which the entity operates. Usually, it is the currency in which the cash transactions of the entity take place in the economic environment.

3.3. Current Rate Method and Temporal Method

There are two approaches to translate foreign currency financial statements: current method and temporal method.

Current method translates all assets and liabilities at the current exchange rate, while the temporal method translates all monetary assets and liabilities at the current exchange rate; while the nonmonetary assets and liabilities are measured at the exchange rate of the date they were incurred. Thus, using the temporal method, a long-term asset is always measured at the exchange rate when its book value was first recorded.

The basic idea underlying the temporal method is that assets and liabilities should be translated in such a way that the measurement basis (either current value or historic cost) in the foreign currency is preserved after translating to the patient’s presentation currency. To achieve this objective, assets and liabilities carried on the foreign currency balance sheet at a current value are translated at the current exchange rate, and assets and liabilities carried on the foreign currency balance sheet at historic costs are translated at historic exchange rates.
3.4. Appropriateness Criteria

The methodology to be used – either current or temporal – depends on the currency which an entity uses at its functional and presentation currency. Sometimes the foreign entities might use a third currency, for example, US Dollar or Euro, as their functional currency adding a further step in the complexity.

Both IFRS and US GAAP outline a three-step process to perform the foreign currency translation:

1. Identify the functional currency of the foreign entity.
2. Translate foreign currency balances into the foreign entity’s functional currency.
3. Use current exchange rate to translate foreign entity’s functional currency balances into the parent’s presentation currency, if they are different.

This methodology primarily leads to the conclusion that the current methodology is used if the local currency of the foreign entity is used as the functional currency of the foreign entity and the temporal methodology is used when the local currency of the parent entity is used as the functional currency of the foreign entity [16].

3.5. Determining Functional Currency

IAS 21 recommends consideration of the following factors in determining an entity’s functional currency:

1. The currency that influences sales prices for goods and services
2. The currency of the country whose competitive forces and regulations mainly determine the sales price of its goods and services.
3. The currency that mainly influences labor, material, and other costs of providing goods and services
4. The currency in which funds from financing activities are generated
5. The currency in which receipts from operating activities are usually retained.

4. Results and Conclusions

Performance parameters within enterprise-level IT systems are used to measure hospital performance in operational and functional terms. These include established financial ratios to calculate the profitability, leverage, cash flow, activity based costing, and so on – and are further specialized by the case-mix parameters using DRGs, defined services or in terms of macro parameters like disability adjusted life years, lifetime cost of a treatment, and so on.

Given that almost all of the balance sheet, when using current method, and a portion of it, when using temporal method, are exposed to foreign currency translation-based variations, it is imperative that enterprise-level IT systems incorporate these complexities when they are recording the primary data or producing the secondary data used to measure performance.

Currency fluctuations, an all-too-common phenomenon of this age, affect the balance sheet and residual income parameters differently when the current or temporal methodology for currency translation is used. The effects can so dramatic that the expense of such effects might have a huge impact on the financial and operational performance of the foreign subsidiaries of a hospital chain. The most affected
parameters using current methodology are those where long-term asset values are compared to sales (e.g., Asset turnover) as the sales revenues and the asset value using different exchange rates for evaluation. There are also different implications depending on how much the balance sheet exposure really is and is determined by the amount of assets and liabilities which are current. Inventory management gets even more complex as inventory is usually bought over different periods of times and uses carry-overs from previous years. Thus the inventory management modules of enterprise-level IT systems would need to be highly sophisticated in order to adapt to the needs of international hospital chains.

Other factors which also need to be considered, and be built in within the enterprise-level IT systems, is the kind of consolidation of income, assets, liabilities and equity is present within the parent and the foreign subsidiary. Depending on the extent of ownership, ability to influence or integration of the processes between the parent and the subsidiary, different rules apply from FASB and IFRS. These dimensions, similar to foreign currency translation, can influence the hospital performance in a major way. Further research is needed to objectify the impact of all such parameters on international hospital chains – a phenomenon which is on the increase over the years.

References