

CHAPTER 14

Islamic banking systems

14.1 Introduction

For decades, banks in the conventional banking world have used pre-packaged software systems to meet their everyday processing requirements. Developing software internally to accommodate standard banking functions is now normally only done by the largest of banks, with the majority of institutions finding it more cost-effective to purchase a package then adapt it to meet their specific needs. The emergence of Shari'a-compliant banking has changed the demands made on those computer systems. Some vendors have reacted to those changed requirements and have produced standard Shari'a-compliant banking packages that can be tailored to meet the specific needs of an individual Islamic bank.

14.2 Islamic banking systems industry

The current business downturn has had its impact on the level of sales made to the Islamic banking sector, but there have been some sales made throughout 2008 and they seem to be continuing into 2009 and 2010.

In general terms, there are two broad categories of packaged banking systems that are available to meet the processing requirements of Islamic banking – those standard conventional banking system packages that have been specially modified and enhanced to cope with the new Islamic product set, and those that have been built from the ground up as Shari'a-compliant.

14.3 Suppliers of Shari'a-compliant systems

The suppliers of Islamic banking systems are of all dif-

ferent shapes and sizes. Some are small companies that have concentrated selling to a specific country or region. Some provide retail core banking capability – covering the basic needs of accounting, customer information storage, through to statement production and reporting – while others provide more niche processing such as wealth management or capital markets processing. But there are others that are truly international in scope and provide the wide range of functionality that may be expected from suppliers of universal banking systems.

The consensus is that there are around fifteen to twenty international suppliers of banking systems that claim to have Shari'a-compliance and that are selling outside of the vendor's home region. Within this group there are around half a dozen leading companies.

The internal focus within vendor organisations varies between different suppliers. Some have elected to make Shari'a-compliant banking systems their primary package offering, while other conventional systems vendors have realised that although there are some fundamental differences, most areas of banking, from a processing point of view, remain just the same for both Islamic and conventional banks so offer an Islamic package alongside their conventional offering.

Certainly there are some internal bank processing silos that don't need material changes, regardless of whether the processing is taking place within an Islamic or a conventional bank. An Islamic bank is still a bank – so must meet the same basic level of demands as any other member of the industry. In fact, often, an Islamic bank must meet those basic levels and then more. For example, regulatory reporting formats are dictated by the regulator in a particular country and while those formats apply to all banks in that country they were originally de-

veloped with conventional banking in mind. However, in an Islamic bank the general ledger charts of accounts, on which the reporting is based, are set out differently to those of a conventional bank. Additional work is therefore needed to convert the raw accounting data into a more conventional format prior to creating reports for the regulators (there are particularly differences, for example, around the use of some liability accounts).

Additionally, all banks, Islamic or conventional, need to make and receive payments, customer information still needs to be maintained and customer centric views of relationships are important for customer service and marketing. Both types of banks must meet asset-liability management demands, although there are arguably less tools available to the Islamic bank to meet short-term liquidity management. Know Your Customer and anti-money laundering requirements must be addressed by both conventional and Islamic banks.

It is this similarity of common functions that has prompted some vendors, whose packaged systems offer a broad range of functionality, to realise that only specific areas need be changed to adapt to the Shari'a-compliant way and they can compete with some of the Shari'a specialists by offering broad functionality founded on an established user-base.

It is arguable that while the conventional systems may claim a broader functionality, the Shari'a from-the-ground-up packages may offer 'more pure' Islamic processing, but because they are younger may not offer as much functionality. It is also problematic as to how much of the functionality offered by a modified conventional system may be applicable to an Islamic bank especially in terms of transaction set, as many conventional transactions are not applicable.

14.4 But not for everyone

Not all vendors of packaged banking systems have developed Shari'a-compliant systems. Some have stood back either to see if this fledging market would, in fact, survive or because the development needs of their client-base lay elsewhere.

Developing a Shari'a-compliant system can cause some problems for vendors of banking systems. Unless the vendor has a development partner in the form of an IFI that will assist in specifying requirements, they will not find it easy to come up with the knowledge that is needed. There is a shortage of skilled people that have the IT skills and the Shari'a knowledge to enable a conventional banking system to be successfully modified to comply with Islamic processing, or to build an Islamic package from the ground up. This situation is not helped by the apparent lack of uniformity across the Islamic world as to what is and what isn't acceptable. The functionality developed by a vendor in one part of the world may not be applicable, or saleable, in another region.

The vendor also needs to consider the commercial aspect of the cost of developing the system versus the expected returns from sales. It is not only the development costs that the vendor will have to bear but also

the on-going maintenance costs. If two versions of the system are created, one conventional and the other Islamic, each change of code or new release of system will need to be tested against both the conventional version as well as the Islamic version. This will be an ongoing expense that will grow as the Islamic version of the system grows in size and functionality.

In some cases, vendors and even banks themselves have overcome some of these maintenance problems by segregating the changes into special areas or layers of the system. At Dubai Bank, the Equation system from Misys provides the core processing. When the bank decided to switch from conventional and become Islamic, the bank's IT department built a new 'layer' on top of the conventional processing to accommodate the new Shari'a-compliant processing needs. Other vendors use parameter settings to significantly change the way instruments are processed. Temenos for example uses a 'model-bank' approach in its T24 product in which standard parameters can be set to invoke processing designed to meet Shari'a needs. ERI, although having built specialist processing for Islamic instruments into its Olympic Banking System, is able to use existing functionality originally developed for mutual fund processing to accommodate profit distribution.

14.5 Leaders are emerging

In their various ways, those vendors that have chosen to do so have overcome the obstacles to entering the Islamic systems market and early entrants have taken advantage of the growing number of opportunities available. Already, some players seem to be leading the way.

14.6 Size of the Islamic banking systems market

Many of the vendors that populate the Islamic banking systems market also populate the conventional banking systems market, so it may be worthwhile to look briefly at the overall market to establish a benchmark, before looking at the newer Islamic market.

The overall banking systems market is made up of several hundred vendors; some selling locally, some selling regionally, while others selling internationally. There are around one hundred vendors that are recognised as selling internationally. There is an Annual Sales League Table¹ that tracks the sales of each vendor over the previous year. That table shows that two vendors, Temenos and Oracle Financial Services Software (l-flex, as was) dominate the market and have done so for at least the last five or so years. These two vendors each have around twice the number of sales (about 40 each last year) as their competitors² and a total user base in the order of 480+ and 320+ bank customers respectively.

In all, the current league table counts 431 new sales of banking systems during the year. These figures include sales of both conventional and Islamic banking systems, although, as will be seen later, the Islamic sales are of a

¹ The Annual Sales League Table is produced by IBS Publishing, a UK publisher that tracks the back office systems market.

² In fact this year there was another vendor, Infracore, that had a similar number of sales but that was attributed to an unusual situation in its home country of India.

much smaller magnitude. Excluded from those figures are large regional vendors that operate exclusively in their home regions of China, Russia (around 76 deals) and the US (estimated 400+ sales), although international sales by those vendors are counted.

14.7 Islamic sector

The Islamic banking sector of the systems market is more difficult to quantify. As mentioned, there are various estimates, but the consensus would seem to be that there are around 15 to 20 vendors that claim to offer Shari'a-compliant banking systems. One estimate is that there may be a total of combined sales of all vendors to Shari'a-compliant organisations over the years at a little over 200 or so.

Although the 431 sales in the last twelve months for all vendors include those to Shari'a-compliant banks as well as to conventional banks, there may be some indication as to the relative size of the Islamic banking systems market by looking at the sales figures of Path Solutions. This vendor's primary product is a Shari'a-compliant banking system (iMal). It is regarded as the largest selling vendor of Islamic systems, last year recording eleven new sales (which put it in tenth place overall in the league table) bringing its total estimated installed user base to around 60 bank customers.

There does appear to be some regional variations in sales preferences. Some vendors seem to enjoy sales in all of the Islamic regions, whereas others may have a slightly more regional sales appeal.

14.8 Some essential characteristics of Shari'a-compliant systems

The most obvious characteristic of Shari'a-compliant systems is that the system should not calculate interest. This is not a problem for the Shari'a from-the-ground-up type package but it can be an issue for converted conventional systems. Ideally, converted systems should not only refrain from calculating interest but the wording should not appear on any screen or report. If the interest programs do have to be shipped as part of the system, then the interest rates should be set to zero at the global level.

In place of calculating interest, the system must be able to calculate and distribute profit. This profit distribution is probably one of the key differentiating factors between the different Islamic banking systems with various nuances being claimed by individual vendors.

The key requirement from a processing point of view is that client investment accounts can be assigned to a profit pool (or a combination of pools) and income and expenses allocated to those pools to calculate profit. That profit is then distributed to the accounts according to some predefined processing rules.

To smooth out the amount of profit payable from pe-

riod to period, the bank may use an intermediary equalisation account to take out the high profits in good times, supplement the low profits in bad times, or to make other accounting adjustments.

Quite often, a bank will do an interim calculation on its investment accounts to determine the order of magnitude of its outgoings and then, after adjustment, will recalculate the real amounts to be paid to customers.

Different packaged systems use different methods to achieve this profit distribution. Path Solutions for example, claims that at the heart of its iMal system is its real-time profit distribution engine. Other converted conventional systems, Misys' Equation for example, use alternative methods to achieve the distribution.

Another important factor to be considered when looking at an Islamic banking system is the degree of control that a bank will have in its treatment of accounting events. Ideally, the system should allow for the complete user definition of all accounting explosions for each of its user-defined accounting events. Some systems are sophisticated enough to be able to account for events using multiple accounting standards.

A key requirement is the ability for non-IT users to build new products and assign operating parameters, processing rules and other variables necessary to bring new products to market quickly. Additionally, existing products should be capable of having parameters modified and processing rules changed. This flexibility is necessary to meet the changing needs of the Islamic banking marketplace.

The system should also have the ability to not only hold an Islamic-style general ledger, but also to be able to convert that layout back into a conventional format for regulatory reporting or for combining with other conventional banking group companies.

A workflow system is also considered essential. By using workflow the bank can assure its Shari'a board that each transaction is processed in exactly the same authorised manner each time.

14.9 The Islamic banking package market participants

There are many specialist vendors that operate purely within their home country but some internationally recognised vendors have been active in the Islamic banking systems market for some time and have built up fairly sizeable user group bases. New vendors are coming along and older vendors will be dropping out (for example, most probably the Misys systems at some point will be replaced by that company's newer Bankfusion product).

Path Solutions has built its iMal system as Islamic from the very beginning. It is believed to have the largest user base of Shari'a-compliant financial institutions. But Path is not the only supplier that has built its system as Is-

Islamic from the ground up. Other vendors include Infopro Sdn Bhd and Microlink Solutions Bhd which, as their names suggest, are Malaysian companies. Both systems have been designed and developed as Shari'a-compliant banking systems. Both are used widely within the Malaysian region and have now branched into other regions.

But the bulk of the market in terms of numbers is made up of conventional systems vendors that have modified their systems to meet Shari'a requirements. These vendors include the giant US-based international suppliers such as Fidelity National Information Services and Sungard Financial Systems which have systems that claim Islamic functionality and users. Of the two other leading conventional banking packages that have been mentioned, Oracle FSS's Flexcube package is used at Shamil Bank in Bahrain which it won against strong opposition from Temenos and others. The vendor's Indian development centres have been able to produce Islamic banking modules which add to the already significant functionality that was originally developed for its original parent company, Citibank. The system is also used at other banks in the Middle East including Dubai Islamic Bank. Temenos, meanwhile, is not to be ignored, with its Islamic offering of T24 being taken by some significant Islamic banks including Al Salam Bank in Bahrain, Bank Islam Malaysia and Meezan Bank in Pakistan.

Misys is a well-known name in all of the Islamic regions and has widely promoted one of its older systems, Equation, as being Shari'a-compliant with some notable success. The Islamic Bank of Britain, the UK's only Islamic retail bank, uses the Equation product as does Al Baraka (in several locations), Sharjah Islamic Bank and a cluster of banks in Qatar. The product has possibly the largest user base other than Path Solutions.

In addition to the pure Islamic system vendors and the modified conventional system vendors, there is a third group that sits somewhere between the two. This third group is made up of independent organisations, often based in Muslim countries, which supply a conventional banking system that has been permanently modified to accommodate the Shari'a requirements. One of the vendors in this third group is International Turnkey Systems (ITS). This Kuwait-based company has taken the Phoenix system (under agreement from US supplier Harland Financial Solutions) and modified it to sell into Islamic banks. ITS has assembled a range of products for Islamic banks, some sourced from other suppliers (such as the NetEconomy anti-money laundering and fraud prevention package) and some developed in-house (such as its front-end system, IBS Islamic).

Kuala Lumpur-based Silverlake is a supplier of an Islamic core banking system (Siibs) that enjoys some degree of success mostly in the Asian region but also some sites outside of that region. The origins of the conventional version of the system seem to have a common source with the Sibs system offered by the US-based John Henry Associates. Nevertheless, the system has been extensively enhanced by Silverlake and now offers separate modules to accommodate a fairly wide range of Islamic processing.

The use of one Islamic banking package in a bank does

not preclude the use of another for different purposes. Bank of London and the Middle East, for example, uses Path Solutions for its core Islamic processing but has chosen an Oracle FSS-supplied front-end for its specialist wealth management arm.

14.10 Around the regions

The main regional markets in the Islamic banking world naturally follow the concentration of Islamic banking services and are made up of the Middle East, Malaysia and Indonesia, the African nations, Asia Pacific/South East Asia (Singapore, Hong Kong) and the Pakistan/India/Bangladesh region. There are some variations between each region as to what is considered acceptable and what is not. Malaysia and Indonesia are generally regarded as the most liberal regarding acceptance of new products. Conventional banking is prohibited in Iran's banking system.

In terms of the domiciled vendors, Asia is well represented with the Malaysian and Indonesian regions particularly rich in Islamic systems vendors with, as mentioned, Infopro, Microlink and Silverlake having an impressive number of implementations in the region and abroad. The Singapore-based developer System Access that created the Symbols system which claims Islamic users has now been absorbed into the US-based Sungard Financial Systems group as Sungard System Access but still maintains its Singapore operation.

India is also well served with package vendors for both conventional and Islamic banking and is home to some of the largest names in the industry. Of the many vendors resident in that country 3i Infotech, Infosys Technologies, Infracore, Polaris Software, Tata Consultancy Services (TCS) are known to have Islamic users of their systems. Pakistan has its own internal vendors but is represented internationally by Autosoft Dynamics and Bangladesh is home to Leadsoft.

The Middle East has its share of specialist vendors. As well as Path Solutions and International Turnkey Systems that have already been mentioned, there are vendors such as BML Istisharat and representative offices of most of the major vendors. International Computer Systems (London) Ltd. although having its head office in London, has a major development centre in Jordan and all of its Islamic customers are located in Middle Eastern countries.

London is also home to Misys; Geneva-based Temenos also has a major operating unit in that city as does ERI Bancaire.

14.11 Scope of packaged Islamic systems

Selecting the right system

An Islamic bank will need to select a package that best meets its functional requirements and that is most closely aligned to its type of business. Some vendors that

have been mentioned, Temenos, Oracle FSS, Path and Silverlake, for example, provide systems that are universal in nature so can generally cover the requirements of retail banking, wealth management and private banking, treasury and interbank transactions, corporate banking and some capital markets processing. Other systems, such as Equation, are better known for their retail capabilities. Yet others, such as ERI, provide specialist wealth management systems that cater to high net worth individuals and their investments, while the likes of Reuters (now Thompson-Reuters) has been traditionally strong in treasury operations and dealing rooms.

The selection of the most appropriate system is a critical project within itself because having once made the decision the bank may have to live with that system for some years to come. A poorly selected system may hamper the future growth of a bank. Systems selection processes can take several months, may involve many areas of the bank as well as its Shari'a board and may use the experience of outside consultants to guide the bank and ensure an impartial selection.

Special aspects of wealth management/asset management

Wealth management involves a financial institution managing an individual's (or family's) assets to meet the client's investment objectives. For a manager in an Islamic bank this will mean that, although the range of Shari'a-compliant investment funds and securities is growing at an impressive rate, investments will likely be made in non-Islamic products.

A Shari'a-compliant asset management system, in addition to accommodating the Islamic transaction set and adhering to Shari'a prohibitions, will need to be able to screen non-Islamic securities to determine if they are acceptable as investments. One way to achieve this is through the use of Shari'a-compliant indexes such as those provided by Dow Jones or Thomson-Reuters. Other options would be to use collective investment funds (mutual funds, unit trusts or investment trusts, for example) that are operated by Islamic institutions and are accepted by the asset manager's Shari'a board as being Shari'a-compliant. For other securities, it may be necessary for the Islamic institution to perform the screening themselves. The computer package must be able to accept screening criteria as set down by the institution's Shari'a board, which will likely include examination of the business line of the underlying company, debt levels, sources of income, liquidity ratios and the like.

The use of acceptable securities brings into play the question of purification. This is a method of modifying the cash-flow received from the security by reducing it according to an estimated ratio of haram activities of the underlying company e.g. receiving profit income from interest, or receiving a proportion of its income from alcohol sales in a restaurant. Depending on the view of the asset manager's Shari'a board, the purification may take place only on dividend income or additionally on capital gains made through the increase in share price of the company. The computer system used by Islamic asset managers must be able to track the level of purification necessary and direct this amount into a charity account.

If the same computer system is installed in a bank that has operations in different regions then it must be able to accept different compliance criteria for each region. For example, Islamic bonds issued in Malaysia are accepted as being Shari'a-compliant in that region but are not accepted (on the basis of bai' al-dayn) in some other regions.

'Sell-side' investment management and capital markets

The term 'sell-side' refers to institutions that create and manage collective investments that are then sold as 'units' to other asset managers who are acting on behalf of their own clients (which are termed buy-side). If Investment Company A creates a Shari'a-compliant equity fund which it packages into units of \$100 each, of which Islamic Asset Manager B buys units for its own clients, then Investment Company A is 'sell-side' and Islamic Asset Manager B is 'buy-side'. It is, of course, quite possible for different departments of the same institution to act as buy-side and sell-side. Nevertheless, the demarcation is useful from a systems perspective.

The sell-side and capital markets systems will need to be able to accommodate the requirements of managing, issuing, and profit distribution of sukuk, equity funds, commodity funds, murabaha funds as well as complex musharaka and mudaraba investments.

Islamic banks may join together to jointly finance a large project. This arrangement, called syndicated financing, should be accommodated by the computer system when the bank is acting either as lead manager or as a syndicate member.

Treasury systems

The permissible operations of an Islamic bank are more limited in scope than those of a conventional bank. The concept of conventional treasury management is to use available cash balances, or projected balances, to generate income through monetary investments (interest). This is not available to an Islamic institution. Other conventional treasury operations involve future foreign exchange operations, fixed income products, derivatives, money market operations and the like, which, as a general statement, are not commonly available to the treasury department of an Islamic bank.

In their place are the Islamic transaction set including tawarruq and reverse-murabaha. Recent rulings may have placed the compliance of these transactions in some doubt, but at least for the time being there is still a need for them to be processed.

The accounting of these transactions works differently to the accruals normally found in a treasury operation and some specialist treasury systems vendors, for example Thompson-Reuters, have modified their systems to meet this need. Other universal systems also offer treasury modules.

14.12 Types of Islamic institutions needing

Shari'a-compliant systems

14.12.1 Islamic-only institutions

Fully fledged Islamic institutions, as do conventional banks, need some form of automated processing to cost-effectively handle the routine tasks associated with banking activities.

As has been mentioned, not all of the processing within a bank is of the form that is sensitive to the Shari'a. It is commonplace to find conventional systems processing in defined areas such as incoming/outgoing payments, fraud detection and anti-money laundering, regulatory reporting and maintaining data warehouses, teller and branch automation, general ledger and many of the other support areas within the bank. The Shari'a-compliant banking is needed for the Islamic account processing and monetary transaction postings, regardless of whether those accounts and transactions are retail investment accounts held by individuals, or the full-blown management of a sukuk issue in a capital markets environment.

In an Islamic bank, however, each new transaction process requires the approval of the bank's Shari'a board and once granted that transaction must be processed in the same way each time. The documentation that is produced and the checks that need to be done to execute the transaction properly can be controlled by workflow systems.

14.12.2 Islamic windows

The situation of conventional banks operating an Islamic window is more problematic from a systems' perspective. In this situation the bank is offering conventional banking to some clients and Islamic banking to others. Some of the support and transaction processing functions take a double blow – tellers and branches must maintain the segregation of funds, transactions must be processed by the appropriate computer system and general ledger entries must be kept separate. The bank will in effect have a dividing wall between its conventional processing and its Islamic processing – hence the term 'Islamic window', a separate area dedicated to Shari'a-compliant banking.

In general terms, operating an Islamic window will require the bank to operate two computer systems – one a conventional system and the other an Islamic system.

The practicalities of maintaining this strict segregation and ensuring that there is no co-mingling of funds means that only smaller operations find this form of banking practical. A small, high service-level private banking operation, for example, which deals in high value, low volume business could operate in such an environment if it accepts the increased overhead costs of running parallel but separate systems. Similarly, a specialised corporate banking institution may be able to keep its Islamic financing transactions and supporting business documentation quite separate from its conventional financing.

Other high volume operations generally find it more

convenient to create separate subsidiaries.

14.12.3 Islamic subsidiaries

Creating separate Islamic subsidiaries may help solve the segregation issue but it can also create problems, for example, when it comes to combining financial results and footings from the conventional business and the Islamic business into one group statement for regulatory reporting or for annual statement production. The accounts themselves can be notionally merged to create a combined picture of the group but care and examination is needed when moving funds around the group for inter-company funding. The Shari'a board of the Islamic institution will need to verify that any co-mingling at a group level is of an acceptable amount and is absolutely essential for the operating of the group.

14.13 Future trends

Technology burden

Shari'a-compliant banking systems have been developed and the market for those systems is maturing. Vendors have shown that they can build and sustain their business by providing Islamic banking systems as their primary business offering.

To protect their position in the market, the leading vendors of conventional banking systems have moved to create systems that claim to have to a larger or smaller degree of Shari'a-compliance.

From a systems' perspective there is still the issue that not all of a bank's functionality is impacted by it becoming, or not becoming, an Islamic institution. Institutions have shown, as is the case at Dubai Bank, that if the switch is made to being an Islamic bank, not every system in the bank needs to be thrown out. The wheel does not need to be re-invented – the hub may need to be changed as well as maybe some very important spokes – but the whole thing does not need to be discarded.

This places on Islamic systems developers the overhead of developing functionality that is not particularly Shari'a sensitive while at the same time often burdening developers of conventional systems with two versions of software.

One technical solution to this predicament is the much vaunted Service Oriented Architecture (SOA) that, if implemented, will allow vendors to create individual 'services' (such as statement production, current account processing, unit fund pricing, etc.) and bundle them together in a fashion to suit the end customer. There is work being done at National Bank of Kuwait (NBK) in this respect, where the TCS Bancs system is being 'dismantled' into its component parts (or services) and 'reassembled' into the shape that NBK wishes to implement it as its production system. Other vendors, including vendors of Islamic banking systems, are advanced in this respect and have to a greater or lesser extent implemented this technology.

This will help Islamic system vendors concentrate on the

Shari'a sensitive areas that are important to them and downplay other areas. As Islamic banking moves into mainstream conventional banks, further markets will be opened up to the Islamic systems vendors if they are able to deliver discreet Islamic services and accounting into existing computer systems.

Inter-bank market and platform

The industry needs to have Islamic banks more closely connected to each other not only in terms of products and strategy but in terms of bank to bank communications. This will not only aid liquidity management but the sharing of information on prices, making available to those in other countries on the ground market participants, and assisting in forming international joint ventures and syndications.

It is up to the Islamic banking industry to create the products and relationships necessary for this phase but it is up to the technology providers to make the necessary platform and systems available for use.

Flexibility and market turmoil

The Islamic banking sector is currently undergoing significant internal reflection and even some reclassification. The recent ruling on tawarruq, the beginnings of renewed debate on forms of riba, the internal discussions on what constitutes Shari'a-compliant products, Shari'a-based products and Shari'a-acceptance all point to the need to have computer systems that have sufficient flexibility to avoid locking an institution into a closed avenue. Of course, it is difficult to predict with accuracy where the industry will be in five years time but if the installed systems are based on current industry standards, have been developed by vendors who are experienced in getting their products to adapt to different market cycles and who have a skilled and plentiful support staff, then the bank will have taken the professional steps necessary to protect its future in this uncertain time and enable it to take advantage of future growth in the market when this inevitably occurs.

Region	Location	Supplier	System	Total
Africa	Egypt	TCS Financial Solutions	Bancs	1
	Libya	Path Solutions	iMAL	1
	Sudan	Path Solutions	iMAL	2
	Tunisia	Temenos	T24	1
Africa Total				5
Asia Pacific	Hong Kong	Path Solutions	iMAL	1
	Indonesia	Temenos	T24	1
	Malaysia	Callataÿ & Wouters	Thaler	1
		Path Solutions	iMAL	2
	Thomson Reuters	K+TP	1	
Asia Pacific Total				6
Central & South East Asia	Bangladesh	TCS Financial Solutions	Bancs	1
Central & South East Asia Total				1
Middle East	Bahrain	Temenos	T24	1
	Iran	SAB	SAB2i	1
	Iraq	Path Solutions	iMAL	1
	Kuwait	Misys Treasury and Capital Markets	OpicsPlus	1
		Path Solutions	iMAL	1
	Lebanon	Path Solutions	iMAL	2
	Qatar	Misys Treasury and Capital Markets	OpicsPlus	1
		TCS Financial Solutions	Bancs	1
	Saudi Arabia	Misys Treasury and Capital Markets	OpicsPlus	1
	UAE	Path Solutions	iMAL	2
Yemen	Path Solutions	iMAL	1	
Middle East Total				13
Grand Total				25

Islamic core systems: new sales in 2009

Source: IBS Intelligence