

ASSET SERVICES SURVEY 2011



"Significant progress, but still some room for improvement"

A report into the current state of process optimisation within Asset Services operations in the Investment Banking Sector

ABOUT IBACAS

Focused on the Asset Services sector

Ibacas Consultancy Limited is the leading independent Asset Services specialist consultancy in the Financial Services sector. Ibacas was founded in 2002, with a deceptively simple mission – to help our clients improve performance within their Asset Services operations.

That founding mission remains unchanged today. At Ibacas, we still live or die by results. Today, we continue to assist Financial Services clients as they strive to improve service standards and optimise processes.

We help institutions to comply with regulatory requirements. We work with senior managers seeking to retain talented staff and to reduce operating costs, whilst also managing operational risk and improving the level of service they are able to offer their clients.

Ibacas clients

Our direct contacts all have senior roles within operations, key business units and IT. Typically, they are responsible for the smooth running and efficiency of the Asset Services Operation within successful financial services firms.

We work with a range of organisations from international Investment Banks to boutique Fund Managers. We've worked with Global Custodians, Hedge Funds, Prime Brokers, Exchanges, Software Vendors and Market Data Providers.

Get in touch

If you would like to know more about this survey or about Ibacas, please email:

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Or visit our web site:

www.ibacas.com



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1. Survey overview

1.1 Context

Whilst working with some of the leading Investment Banks over the last ten years or so, Ibacas have seen that Asset Services processing has evolved significantly during that time.

In 2007, Ibacas conducted a similar survey to establish the level of optimisation of the Investment Banks Asset Services processing methods. Unsurprisingly, at that time, our survey revealed that high levels of manual processing persisted at *all* stage of the Asset Services processing lifecycle. This survey updates that picture, expanding upon the 2007 work, via indepth analysis of all areas of the event lifecycle.

The participants that we interviewed were seeking to standardise, scale and automate existing operations at a viable cost. They were also looking to reduce inconsistencies, errors and exception-processing. They were seeking to improve the quality of service delivery. And, they were seeking ways to reduce risk within their overall operations, whilst ensuring regulatory compliance.

All of the participants recognised the part that automated and integrated processing can play in achieving such goals. Unsurprisingly, all were at different stages on the "Automation / Integration Journey".

This survey sets out to quantify how much progress the Investment Banking world has made since 2007 and gives the reader a sense of the current state of Asset Services process optimisation within this sector.

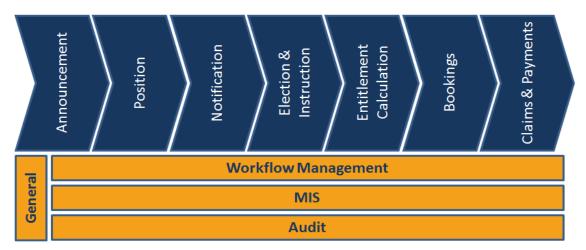
1.2 Survey methodology

This survey was carried out by senior Ibacas consultants, who are specialists in the optimisation of processes within the Asset Services space. The management teams from the Asset Services functions of nine top tier Investment Banks were interviewed in depth. Interviews all took place during 2011, using a Standardised Questionnaire to ensure objectivity and consistent data for later analysis.

The overall Asset Services function was broken down into four distinct processing streams:

- Equity Income
- Equity Corporate Actions
- Debt Income
- Debt Corporate Actions

The questionnaire was then used to analyse the relevant stages of the event lifecycle for each these four processing streams. The event lifecycle was broken down into the following:



Our survey also explores the level of sophistication with regards to high level system architecture, operating models, as well as approaches to workflow and management information systems (MIS).

Firms taking part have been guaranteed anonymity and confidentiality. Participants have been provided with their individual firm's results, detailing the data that underpins the resulting ratings they achieved. However, the aggregated results, published here in part, will be of interest to all firms within the sector, as they provide a useful snapshot of the Asset Services processing space within the top tier global investment banks as a whole.

1.3 Aim of the survey: benchmarking

The overall aim: to benchmark the level of process optimisation within the Asset Services operations of the Investment Banking sector, using three ratings:

World Class Where the firm's processes are completely optimised	
Industry Standard	Where the firm's processes have some levels of optimisation
Minimum	Where the firm's processes are sub optimal across the board and are potentially putting it at a competitive disadvantage and potentially increasing operational risk exposure

Ibacas used a combination of factors to determine the criteria for these categorisations including:

- Adoption of SMPG Global Standards
- Levels of automation and integration
- Customer service offerings
- Quality and depth of risk control
- Scalability of process
- · Adherence to regulatory guidelines

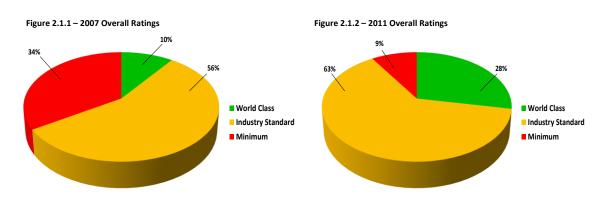
More detail on the methodology employed to arrive at these rankings appears in Appendix A of this document.

For more information on our methodology and on the metrics applied, please contact us via email: info@ibacas.com

2. Executive Summary

2.1 Progress since 2007

Our 2011 survey of nine top tier Global Investment Banks demonstrates the improvements that have been made in client service levels, technical architecture, operational efficiency and risk control in comparison to our 2007 survey.



Overall, there has been a general improvement across the board in terms of Corporate Actions and Income processing since 2007. A higher proportion of participants achieved a "World Class" rating in a higher number of categories this year. There are also fewer "Minimum Standard" ratings in our 2011 survey.

This is all encouraging news, and demonstrates that increased automation, integration and overall process optimisation is "paying dividends" for those who have already invested in appropriate solutions.

In particular, the survey reveals significant improvement at the start of the Asset Services processing chain, with considerable investment being focused on the automation of Announcement processing on the part of vendors and firms. Indeed, Announcement processing has seen the greatest improvement since our 2007 survey, with 61% of our respondents now ranked as "World Class".

2.2 Key insights for 2011

This high level summary of key insights provides a good overview of the survey results. This information has been categorised to show the impact on each of the following dimensions that Ibacas use to measure the level of Asset Services optimisation:

- Client Service
- Architecture
- **R**isk Management
- Efficiency



2.2.1 Client Service

Our survey suggests that the quality of the external client experience has been improving steadily since our last survey in 2007. The introduction of well-designed client portals for receiving notifications and submitting elections has been a factor here. We have also seen improvements in the quality and standardisation of client communications. And, we are seeing better performance in terms of deadlines and the delivery of critical information.

This said, it is worth highlighting that the picture remains patchy. Not all Internal Trading Desks are receiving the same levels of service as external clients. So, as the title of this report suggests, there is still "room for improvement", when it comes to client service and the overall customer experience.

2.2.2 Architecture

In terms of architecture, we are interested in the extent to which the underlying processing platform has been integrated into the participants' core infrastructure, as well as looking at how well the platform can interact with external parties and data sources.

Our survey found general improvements in the quality of vendor data and increased adoption of ISO standards. We are also seeing increased integration of Asset Services modules into generic Clients Portals. On the communications side, we are seeing increased use of ISO standard SWIFT messages across the event lifecycle – which is a welcome development.

On the other hand, our survey reveals continued complexity in the upstream and downstream integration of systems, mainly due to lack of standardisation of accounting methodologies. This is creating barriers to the implementation of off-the-shelf vendor-supplied solutions for full lifecycle processing and embedding future problems and costs. All of this is leading to an over dependence on remote tools and applications.

2.2.3 Risk Management

Our interviews delivered a strong sense of an increased awareness of regulatory responsibilities, as well as an increased focus on reducing operational risk exposure, amongst all our respondents.

Processes are improving as a result, although many risk control activities remain primarily manual for producing Management Information Systems and Dashboards of various kinds. We are seeing a continuing dependence upon remote tools and applications, leading to a lack of centralisation in workflow and audit processes.

Overall, manual processes still dominate, and there remains a varied approach to reconciliation processes. So again, there is considerable "room for improvement".

2.2.4 Operational Efficiency

Where there are more standardised and scalable systems and processes in place, firms have successfully relocated many of their more straightforward activities to more cost effective locations, delivering significant cost efficiencies.

However, in some firms, we are still seeing significant dependence upon remote tools and applications, and the persistence of many manual processes. This is making relocation non-viable or higher risk, and therefore reducing the potential efficiencies that might otherwise be realised. Given the general picture here (a lack of automated straight through processing), many firms are employing processes which are not scalable which are less efficient than they might be.

2.3 Conclusions and next steps

It is clear that there has been significant improvement in Asset Services processing within the Investment Banking community since 2007. However, as the starting point was so low, the investment and effort put in during this time has only managed to raise the average level of process optimisation to the Industry Standard level.

In an increasingly competitive marketplace, with increasingly sophisticated and demanding clients, it is clear that Asset Services will soon become even more of a differentiator for attracting new clients, as well as holding on to existing client bases. The ability to provide a World Class service will become increasingly more important.

In addition, the more challenging level of regulatory requirements further heightens the need for integrated solutions, to allow production of the information required to meet the new regulations around risk and tax reporting.

In many cases, there are non Asset Services specific infrastructure factors that prevent many firms from being able to develop a World Class offering – such as multiple, distributed position keeping systems and complex accounting practices.

The economic climate, along with the intense gaze of the regulator and of clients, will put pressure on Top Tier players to cut costs, to improve operational efficiency and to improve customer service. This must call for investment – but investment in which a relatively rapid ROI can be demonstrated.

How much of that scarce investment goes towards the optimisation of Asset Services operations remains to be seen.

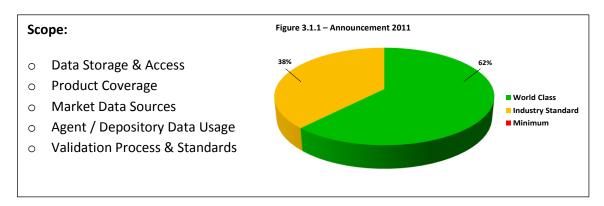
3. Detailed findings and comparisons to 2007

3.1 Announcements

Headlines

- 62% of participants achieved World Class in 2011, compared to 36% in 2007. No participants awarded Minimum Standard
- Improved service from vendor community data and software
- Main focus of investment by participants
- Indicates how benefits can be realised when appropriate investment is made

3.1.1 Overview



3.1.2 2011 Results

In 2011, 62% of all participants achieved an overall rating of World Class and 38% of participants achieved and overall rating of Industry Standard. Moreover, none of the firms involved in our Survey received a "Minimum Standard" rating for this particular process area. This was true across all four functions: Equity Corporate Actions, Equity Income, Debt Corporate Actions and Debt Income.

In fact, Announcements is the only process area where the majority of participants achieved a World Class rating.

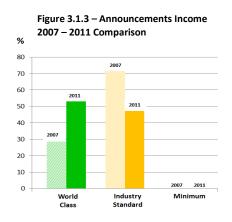
As can be seen in *fig 3.1.2* below, the one area of slight weakness is in the Debt Income process, where only 37% of participants achieved the World Class rating. This is mainly due to underlying issues with reference data quality preventing systemic creation of scheduled coupon event data.

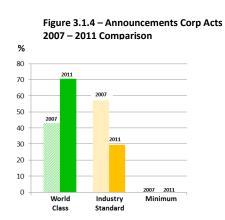
100% 90% 80% 70% 60% World Class 50% 40% Industry Standard 30% Minimum 20% 10% 0% **Equity Equity** Debt Debt CA Income CA Income

Figure 3.1.2 - Announcement - 2011 Detail

3.1.3 2007 - 2011 Comparison

Comparing the 2011 results to those from 2007, it is evident that there has been a significant improvement in the Announcements process over the period.





In both 2007 and 2011, all of the survey participants also achieved either an Industry Standard or World Class rating, with nobody falling into the Minimum Standard category. As shown in *figs 3.1.3 and 3.1.4*, between 2007 and 2011, many of the participants improved their Announcement process for both Corporate Actions and Income events, moving from the Industry Standard level up to World Class.

Overall, 36% of participants achieved a World Class rating in 2007; this rose to 62% in 2011.

- Income events: 29% achieved a World Class rating in 2007; this rose to 53% in 2011.
- Corporate Action events: 43% achieved a World Class rating in 2007; this rose to 71% in 2011.

3.1.4 The Ibacas view

There are a number of reasons for this overall improving trend in the quality of the Announcement process amongst participants.

- Firstly, data vendors have significantly improved to the quality of their offering to Asset Services practitioners in recent years. This is in terms of market and product coverage, as well as in terms of the quality, accuracy and timing of the data they provide.
- The data vendor community has fully embraced the ISO15022 standards and all the major vendors now offer an ISO15022 compliant feed. This allows more subscribers to automatically receive and read the vendor data, providing more opportunity for automating a large proportion of the validation process.
- We found a trend towards increased use of external data scrubbing service providers.
 These providers have matured significantly in terms of the understanding of the process they support, as well as being able to benefit from improvements in the service from the underlying data vendors.
- We also identified a higher incidence of vendor supplied announcement validation modules being employed by survey participants. Improved feeds from data vendors (and more accurately formatted agent advices) have enabled users to reap the benefits of using a vendor supplied module.

Overall: it is clear that vendors are partnering with firms to drive forward process automation and cost reduction programmes across their back offices.

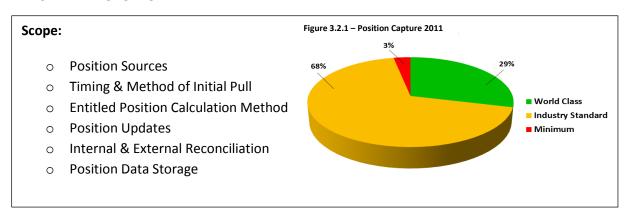
The performance improvements we found in the Announcements space demonstrate the benefits that can be achieved when appropriate funds are allocated to resolving issues within the Asset Services processing lifecycle. Put less positively, as this survey demonstrates, it is clear that there is still room for improvement in terms of optimising the Corporate Actions and Income processing space overall.

3.2 Position Capture

Headlines

- Minimal change in performance since 2007
- Main issue complex, non-standardised underlying books and records and a lack of centralised stock record
- Impact: reliance on remote / manual tools for entitled position calculation and reconciliation

3.2.1 Overview



3.2.2 2011 Results

In 2011, only 29% of all participants achieved an overall rating of World Class here. The vast majority of participants (68%) fell into the Industry Standard category. Just 3% were rated as Minimum Standard.

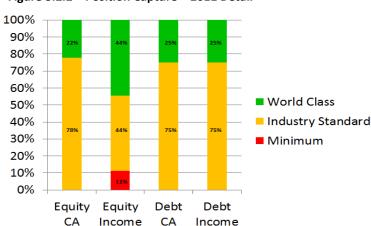


Figure 3.2.2 – Position Capture – 2011 Detail

As can be seen from *fig 3.2.2*, the strongest area for Position Capture was within Equity Income processing, where 42% of participants achieved a World Class rating. This is largely due to improvements made to historical "mainframe style" processing platforms that can perform automated position pulls, sometimes even prior to entitlement date and often triggered by automatically loaded announcement data.

The main reasons that it was not a similar story for Debt Income processing was either the mainframe systems are only linked to Equity position keeping systems; or (as detailed in the Announcements section of this report) the lack of a comprehensive source of coupon event data resulting in retrospective position processing, triggered by the manual input of announcement data after entitlement date.

On the Corporate Actions side, the main differentiator between those achieving World Class and those only reaching Industry Standard was the presence of structured systems automatically requesting and updating entitled positions (versus the use of external applications and tools, such as Excel) for managing this process.

In all categories, a lack of any form of centralised stock record system was common, meaning the participants needed to interrogate multiple position keeping systems in order to calculate the true entitled position.

Furthermore, we found that even when a firm did have a centralised stock record system in place (or a process via which its multiple position-keeping systems can be accessed to pull together a combined position), the need for manual adjustments often still remained.

Our research also showed that, across all respondents, there was very little automation of Entitled Position reconciliation for MT564 messages. This means that Back Office teams are often embroiled in manually intensive processes to work around this issue.

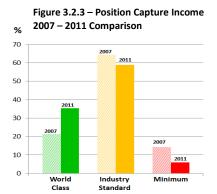
3.2.3 2007 - 2011 Comparison

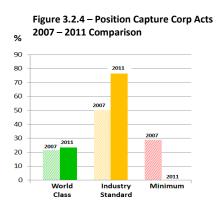
Comparing the overall 2011 results to those from 2007, it can be seen that there has been a slight improvement in the ratings:

Table 3.2.1

Year	World Class	Industry Standard	Minimum Standard
2007	21%	58%	21%
2011	29%	68%	3%

When looking at the comparative results at a more detailed level, it is encouraging to note that none of the participants was given a Minimum Standard rating in 2011 for their Corporate Actions related Position Capture process. This is a great improvement from 2007. However, it is disappointing to note that there has been negligible change in the number of World Class ratings for Corporate Actions.





On the Income side, only one participant was given a Minimum Standard. The increase in the World Class category from 21% to 35% was largely down to the general improvements on the Equity Income side.

3.2.4 The Ibacas view

Whilst it is disappointing to see low levels of improvement in the Position Capture process, this situation is not surprising.

The very nature of Investment Banking means that the associated accounting (for both positions and cash) tends to be complex. Multiple business lines, with multiple client types and multiple position types lead to complicated books and records. Very often, as the business

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grows, additional accounting systems are introduced (such a Prime, Stock Lending, Proprietary and so on). This means that for the Operations Group to get an accurate picture for the Firm, they must reference multiple accounting systems, collate the information, then manually calculate and reconcile entitled positions.

In addition, each Investment Bank adopts a unique accounting methodology. This makes it very difficult to buy "off the shelf" solutions for providing a consolidated stock record view. Similar issues arise when Investment Banks attempt to integrate vendor-supplied Asset Service software solutions. Multiple core modifications, or prohibitive levels of configuration, are required before the vendor solution can be successfully integrated into an Investment Bank's infrastructure. This often extends delivery timelines, and increases costs to the point where it is not viable to implement a vendor-supplied solution.

This situation was reflected by the fact that none of the survey participants had a single vendor-supplied Asset Services solution covering the full processing lifecycle. In fact, the overwhelming majority of participants were either in the process of planning or delivering an in-house built Asset Services solution. However, in the current market conditions, it is becoming increasingly more difficult to secure budget for projects that do not have a very short ROI timescale.

The difficulty involved in automating this process has significant knock-on effects in the downstream processes that are exponentially increased as volumes increase.

- Firstly, as stated previously, many of the participants used remote systems such as Excel to create, manage and store entitled positions. This is clearly an inefficient process, particularly when positions need to be manually extracted from multiple source systems.
 In addition, it adds operational risk that needs to be rigorously managed and controlled.
- Secondly, inefficiencies and inaccuracies at the entitled position stage impact every downstream process in the event lifecycle, whether as a result of incorrect position information, or simply via a delay in calculating positions.

There is no simple solution to this core problem. Accounting practices are unlikely to be standardised in the future, and the restructuring and/or centralising of accounting systems to facilitate easy development of global, cross-business stock records is time-consuming and costly. The Operations Managers who participated in the Ibacas survey all recognised these issues, and have put robust procedures and controls in place to compensate.

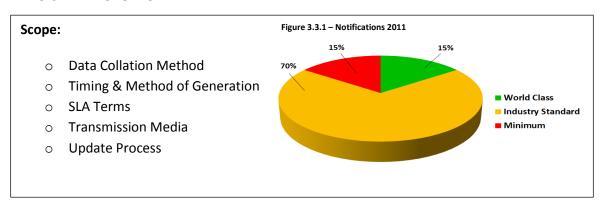
However, as downward pressure on costs increases, and as transaction volumes increase, it may only be a matter of time before losses are incurred as a result of the issues identified above.

3.3 Notifications

Headlines

- 29% World Class, nobody Minimum Standard for Corporate Actions in 2011
- Increased use of Client Portals, improving Client Service experience
- Manually intensive process to feed Client Portal, negatively impacting operational efficiency and scalability

3.3.1 Overview



3.3.2 2011 Results

Overall, most participants (70%) rated Industry Standard, with 15% scoring better or worse (see *fig 3.3.1* above). More detailed analysis (see *fig 3.3.2* below) reveals a significant difference between the ratings awarded for Corporate Actions Notifications processing compared to Income event processing.

Figure 3.3.2 - Notifications - 2011 Detail 100% 90% 80% 70% 60% World Class 50% 40% Industry Standard 30% ■ Minimum 20% 10% 0% **Equity Equity** Debt Debt CA Income CA Income

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For Corporate Actions processing, 29% of participants achieved a World Class rating, with 71% of participants rated as Industry Standard. On the Corporate Actions side, nobody fell into the Minimum Standard category.

The picture for the Income side is not as positive. Here, none of the participants managed to achieve the World Class rating and 71% were rated as Industry Standard, with 29% falling into the Minimum Standard category.

The 2011 survey also found increased deployment of Client Portals for the distribution of Notifications. Such portals are being used to augment email and hard copy distribution, especially where external counterparties are involved. Interestingly, however, none of the firms we surveyed was able to generate Swift Notifications automatically. We suspect that this is due to a lack of client demand, rather than because of practical or technological hurdles.

The focus of these automation initiatives appears to be on providing Notifications to clients, rather than to proprietary trading accounts. Our survey suggests that, in most cases, proprietary trading accounts are only able to receive email notifications, with no access to a bespoke Notification Data Portal. In mitigation, the implementation of a centralised Announcement Repository does provide other opportunities for receiving and accessing Announcement data.

Income Notifications is an area of particular concern, as *none* of the participants in our survey achieved a World Class rating. In addition, 22% of participants provided no Notification process for Income at all. The most common method of Notification for Income is the creation and transmission of Accrual Reports, either as a file feed or via an upload process to client portals.

Reassuringly, every firm in our survey had some form of standardised template for Corporate Actions Notifications. However, only one participant indicated that they were able to create differently formatted templates based on client preference. It would appear that much work still needs to be done with regards to personalised client service in this area.

The vast majority of our survey participants were unable to create their Notifications within a core processing system. As a result, they either use remote systems or manually populate predefined email templates.

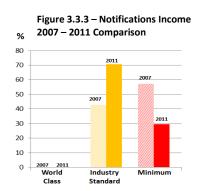
On a more positive note, all but one of our respondents indicated that they were able to offer deadlines for the Notification process of under 24 hours, prior to the agent deadline across the board, with some participants bringing this down to two or three hours, and even one hour for Platinum clients.

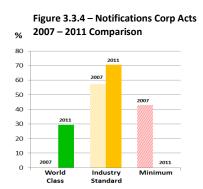
3.3.3 2007 - 2011 Comparison

When comparing the result between 2011 and 2007, it is clear to see that things are heading in the right direction.

On the Corporate Actions side in 2007, a disconcerting 43% of participants was rated as Minimum Standard. It is encouraging to see that none of the participants fell into the Minimum Standard in 2011.

Equally encouraging is that fact that whilst none of the participants were awarded the World Class rating for the Corporate Actions Notifications process in 2007, in 2011 29% of participants achieved a World Class rating:





There has been some improvement on the Income side between 2007 and 2011, but there is still considerable room for improvement.

In 2007, a worrying 57% of participants were rated as only achieving the Minimum Standard for this process. This has been reduced to 29% in the 2011 survey. Equally disappointing is the fact that none of the participants was awarded a World Class rating for this process in either 2007 or 2011. However, this is probably due to a lack of demand from the client side.

Clearly, considerable effort and resources have been directed at addressing shortfalls in the Corporate Actions Notification process, as described in the previous section. On the surface, it seems that the Income Notifications now needs to receive some attention and investment, in order to improve the process and the level of service provided to clients. This will, however, remain a low priority until the level of demand increases on the client side.

3.3.4 The Ibacas view

Significant effort has been made to improve the Notifications process. To a large extent, this has been driven by client demand, as demonstrated by the introduction of client portals by many of the participants. This is a step in the right direction in terms of the overall client experience.

However, the reason that the highest scoring category for this process was Industry Standard is that there is still little automated interaction between the back office Operations process and the client-facing portals.

To an extent, this is largely down to the issues identified in the Positions section of this survey. Without an automated method of accurately determining entitled positions, it is very difficult to automate the subsequent stages in the event lifecycle.

Whilst the Client Portals address many of the Client Service issues that existed in 2007, the majority of the Operations areas still have manually intensive processes that create the data required to either generate notifications, or to send information to client-facing portals. This leads to operational efficiency issues and to a non-scalable process.

Furthermore, in order to manage the high levels of operational risk exposure associated with the Notifications function, the survey participants have rightly added various levels of checkpoints to their processes. Whilst this does largely eliminate the risk issues, it only adds further to the efficiency and scalability problems.

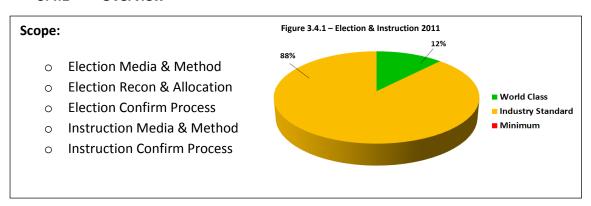
The poor ratings for the Income side of the process may, in part, be due to a current lack of client focus in this area. However, in a business environment in which there is increasing focus on risk and control, it seems likely that this function will require additional attention in the near future. Another driver to improve this process may arise as Investment Banking clients introduce more comprehensive Asset Services systems within their internal Operations groups. This may mean that they will require additional notification messages to drive their internal processes. This may also result in a requirement to send Notifications via alternative media, such as SWIFT MT564/8 messages.

3.4 Election & Instruction

Headlines

- World Class 0% in 2007, 12% in 2011. Minimum Standard 48% in 2007, 0% in 2011
- 55% of responding firms had Client Portals capable of logging Election responses
- Manually intensive process for reconciliation of client elections and subsequent agent / 3rd party instructions
- Manual process and controls increase potential risk exposure

3.4.1 Overview



3.4.2 2011 Results

The overall picture for Election and Instruction processing in 2011 was very similar to that for Corporate Actions Notifications processing.

The vast majority (88%) were awarded the Industry Standard rating, with the remaining 12% achieving World Class. Again, it is encouraging that none of the participants fell into the Minimum Standard. However, the high incidence of manual processes in this function still needs to be addressed in the future (see *fig 3.4.2*)

Equity CA



Debt CA

Figure 3.4.2 - Election & Instruction - 2011 Detail

Just over half (55%) of the firms in our survey have client portals in place. These allow the firm's clients to enter Elections directly into the portal. However, of this 55%, *only one respondent* was able to automatically upload the client elections directly from the portal into its processing platform. All the other participating firms indicated that they update their processing platforms and remote systems manually.

As highlighted already, our survey revealed that portal functionality is not generally available for proprietary trading accounts. Instead, a higher incidence of emails and other manual formats are employed here. This must be impacting on overall risk exposure.

There is also a lack of Swift standard messaging in the election process. This is creating a reliance on email and client portals. Accordingly, there is no MT567 messaging, which means firms provide manual (or minimum) confirmation of election receipt.

Only one participant indicated that they were able to automatically reconcile and allocate the elections received. This remains a manual, time intensive process for all other participants, and it usually takes place in remote systems. Again, this must be adding to associated risk exposure.

On the instruction side, it is good to see that all participants are now sending agent Instructions via MT565 messages (where agents accept them). However, only one participating firm was able to generate these messages automatically.

The sending of instructions to brokers and stock-lending counterparties is still a manual process involving email and fax. This is probably an historical habit that has endured despite the existence of viable and better alternatives. Our survey suggests that enlightened firms are reviewing the range of media that counterparties are now able to accept, as well as looking at centralised market platforms that can be employed for such tasks (i.e. platforms such as Equilend and Pirum).

All participants indicated that they are able to receive MT567 confirmations from agents. However, only one participant said that their firm was able to automatically receive the MT567 messages into its processing platform.

Our survey suggests that even though some firms are able to receive formatted SWIFT messages into upstream systems, the automation and integration between systems needs to be improved. Only when such improvements are in place will the benefits relating to efficiency and risk control be fully realised.

3.4.3 2007 - 2011 Comparison

Again, the comparison between 2011 and 2007 for Election and Instruction is similar to that for Corporate Actions Notifications

(Note – no analysis for income events, as any optional income events were categorised as Corporate Actions)

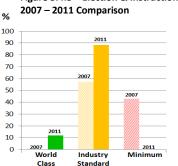


Figure 3.4.3 – Election & Instruction Corp Acts

In 2007, a worrying 43% of participants were rated as Minimum Standard. It is encouraging to see that none of the participants fell into the Minimum Standard in 2011. Equally encouraging is that fact that whilst none of the participants was awarded the World Class rating for the Corporate Actions Notifications process in 2007, 12% of participants achieved a World Class rating in the 2011 survey.

3.4.4 The Ibacas view

Once again, it is clear that significant effort has been made to improve the Election and Instruction process. The improvements have mainly come on the Election side, and have been driven by client demand, as demonstrated by the introduction of client portals by many of the participants. This is clearly a step in the right direction in terms of the overall client experience.

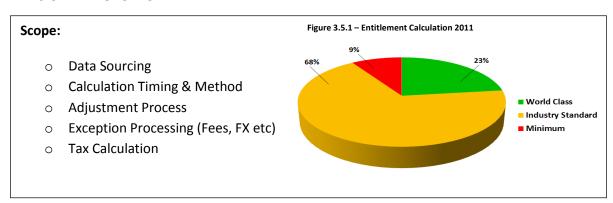
However, similar inefficiencies to those identified in the Notifications section of the survey review are applicable to these processes as well. In addition, the manual nature of the Agent Instruction process represents the biggest area of potential risk for participants. Once again the Operations managers have put in place very robust procedures for multiple checkpoints in this process, but this simply compounds the issues previously identified relating to scalability.

3.5 Entitlement Calculation

Headlines

- Equity Income: World Class 0% in 2007, 35% in 2011. Minimum Standard 28% in 2007, 0% in 2011.
- Corporate Actions still a highly manual process, executed in remote systems.
- Largely a result of upstream issues. Operational efficiency will be greatly improved when upstream problems are resolved.

3.5.1 Overview



3.5.2 2011 Results

Once again, the most common overall rating was Industry Standard (68%). Of the remaining participants, an encouraging 23% achieved World Class, with the remaining 9% falling into Minimum Standard.

As *fig 3.5.2* below illustrates, the detailed results for Entitlement Calculation show a similar pattern to those for Position Capture.

100% 90% 80% 70% 60% ■ World Class 50% Industry Standard 40% 30% ■ Minimum 20% 10% 0% Equity Equity Debt Debt CA Income CA Income

Figure 3.5.2 – Entitlement Calculation – 2011 Detail

Entitlement Calculation for Income (where 35% of participants achieved a World Class rating and none of the participants fell into the Minimum Standard) was considerably stronger than the equivalent process for Corporate Actions (where only 12% scored in the World Class category and 17% fell into Minimum Standard).

Equity Income was particularly strong, with 44% of participants being awarded the World Class rating. This is linked to the point identified within the Position Capture section of this report:

- Many of the participant firms have invested in updating their mainframe systems that handle the Income event processing
- These systems automatically calculate entitlements on key dates, based on pre-loaded basic announcement and position information

In addition, for both Equity and Debt Income processing there is a large variance in the approach to tax calculation processing. Some participants automate this function within the generic entitlement calculation process, whilst others manually adjust tax rates (particularly in relation to stock lending positions). Other participants post gross and have a separate tax operations team that make the required adjustments, after the bookings process has been executed. There is also a general lack of centralised tax documentation within the firms surveyed, which could pose serious problems for those preparing to meet future FATCA requirements.

On the Corporate Actions side, there was a more diverse picture in terms of how participants executed the Entitlement Calculation process. Some of the participants had developed comprehensive proprietary systems that automated the bulk of this process. However, for the majority of respondents, Entitlement Calculation is largely a manual process, executed in remote systems or applications such as Excel.

The process of internal and external reconciliation was where the greatest divergence of approach was found, ranging from fully automated processes, to semi-automated, to manual, to no process at all.

3.5.3 **2007 - 2011 Comparison**

Comparing the overall 2011 results to those from 2007, it can be seen that there has been a significant improvement in the ratings:

Table 3.5.1

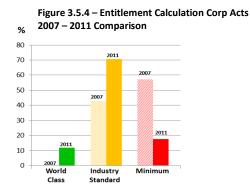
Year	World Class	Industry Standard	Minimum Standard
2007	0%	57%	43%
2011	23%	68%	9%

Clearly there has been considerable investment in this process by the participant firms. This is shown by the fact that overall, 23% of respondents were awarded the World Class rating in 2011 – nobody managed to achieve this rating in 2007. Furthermore, the percentage of participants falling into the Minimum Standard category has fallen dramatically from 43% in 2007, down to 9% in 2011.

Figure 3.5.3 – Entitlement Calculation Income 2007 – 2011 Comparison

80
70
2007
2001
30
2007
2007
2007
2007
2007

Industry



When looking at the comparative results at a more detailed level, it is encouraging to see that 35% of the participants was given a World Class rating in 2011 for their Income related Entitlement Calculation process. This is a significant improvement compared to 2007, when none of participants managed to achieve this rating. In addition, none of the respondents were given a rating of Minimum Standard in the 2011 survey. This is particularly impressive considering that in 2007, 28% of participants fell into this category.

The picture is very similar for Corporate Actions in terms of progress. World Class ratings have increased from 0% in 2007 to 12% in 2011 and Minimum Standard ratings have fallen from an alarming 57% in 2007 to 18% in 2011.

However, as Corporate Actions Entitlement Calculation scored so poorly in 2007, the ratings in 2011 are still behind those achieved on the Income side. Clearly this is moving in the right direction but still needs more focus. However, it may prove difficult to significantly improve this process before addressing some of the core upstream issues.

3.5.4 The Ibacas view

The fact that the Entitlement Calculation process is still dominated by Industry Standard ratings, despite considerable improvement since 2007, is not surprising.

For the majority of survey participants, this is a manual or semi-automated process that is at the end of a chain of upstream manual processes. As a result of the issues identified in previous sections, there is a cumulative effect on the ability to efficiently calculate the resulting entitlements.

When remote systems are employed, changes to announcement information or entitled positions, election choices, rounding, cash in lieu etc. all need to be performed manually. This creates a non-scalable process, with little opportunity to improve operational efficiency.

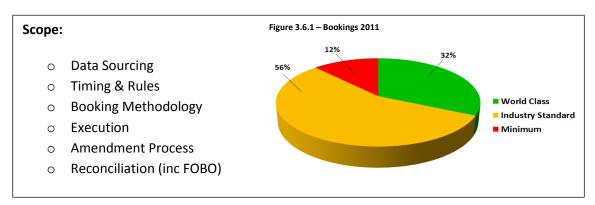
Those respondents that have resolved many of the upstream issues through investment in technology have been able to effectively make Entitlement Calculation an "invisible" process. Accordingly, they are able to reduce the number of resources required across the lifecycle process and allow the limited resources to focus more time on monitoring the higher risk tasks.

3.6 Bookings

Headlines

- Significant improvements between 2007 and 2011, across the board
- Income: World Class 0% in 2007, 41% in 2011. Minimum Standard 57% in 2007, 6% in 2011.
- More automation for Income than for Corporate Actions
- Highly variable processes, dependent upon each participants' underlying accounting systems, processes and conventions
- Manual processes in Corporate Actions require development of numerous reporting tools to reactively monitor any risk issues

3.6.1 Overview



3.6.2 2011 Results

Overall, the Bookings process had the second highest incidence of World Class ratings, with 32% of participants being rated in this category.

On closer inspection, the highest ratings can be found within Equity Income, where 55% of participants have achieved a World Class rating, compared to 33% for Debt Income and only 22% for both Equity and Debt Corporate Actions.

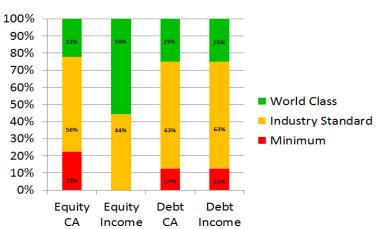


Figure 3.6.2 - Bookings - 2011 Detail

The biggest variation in methodologies across firms can be found in their bookings process, which can be largely attributed to the differences in the underlying accounting practices adopted by the various survey participants.

For the accruals process, there is a much higher level of automation for Income than for Corporate Actions. However, many participants only accrue for proprietary trading positions and not for their clients. Many participants did not have an accrual process for Corporate Action events. Unsurprisingly, the majority of participants that did post accruals executed this via a manual process.

On the bookings side, there is a similar story in terms of automation. We are seeing more progress within Income, with mainly manual or semi-automated processes surviving in Corporate Actions.

In terms of timing, again there is great variation in results, ranging from bookings taking place on ex date, record date, pay date, upon receipt of an MT566, or upon receipt of physical funds. This range of results is not unexpected, given that this space is not governed by market practice guidelines, and is dependent on the establishment of internal procedures. Moreover, there are no guidelines from regulatory authorities regarding the methods for handling bookings processes.

The bookings confirmation process is either manual or non-existent within the firms surveyed. Most therefore rely on downstream validation, using reconciliation processes to ensure bookings have taken place. This is a largely reactive process that employs a comprehensive range of robust reporting tools to monitor FOBO, Nostro, Suspense and Control account breaks.

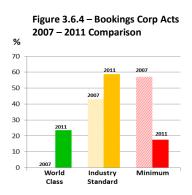
3.6.3 2007 - 2011 Comparison

Comparing the overall 2011 results to those from 2007, it can be seen that there has been a significant improvement in the ratings:

Table 3.6.1

Year	World Class	Industry Standard	Minimum Standard
2007	0%	43%	57%
2011	32%	56%	12%

Overall, 32% of respondents were awarded the World Class rating in 2011, whereas nobody achieved this rating in 2007. Furthermore, the percentage of participants falling into the Minimum Standard category has decreased dramatically from 57% in 2007, down to 12% in 2011.



When looking at the comparison results in more detail, it can be seen that there is a very similar pattern to that identified for Entitlement Calculation.

There has been an overall improvement in the Bookings process, with Income processing making greater improvements than the Corporate Actions side.

Again this can be explained by the use of more automated mainframe systems for Income processing, and a higher incidence of manually intensive remote systems and applications being used for Corporate Actions

3.6.4 The Ibacas view

Determining the boundaries between World Class, Industry Standard and Minimum Standard for Bookings was the most difficult for all the functions in the survey. This was mirrored in the results, as it was the area in which we found the greatest diversity in approach and execution.

This is due to a lack of standardisation for this process. There is no agreed market practice for the execution of bookings, or even any agreed guidelines. This is true for both Asset Service-specific bookings, as well as at the overall firm-wide accounting process level. As a result, there is often blurring of the split of responsibilities and ownership between front and back office groups for Bookings-related functions. In addition, Ibacas has seen a number of instances where the front and back office systems operate with different accounting models, thereby further complicating this process.

When fully automated processing systems are in place, these issues are easier to mitigate as electronic messages can be sent between the relevant parties. In a manually intensive environment, it becomes more difficult to ensure the right level of communication, between the necessary parties, takes place at the right time.

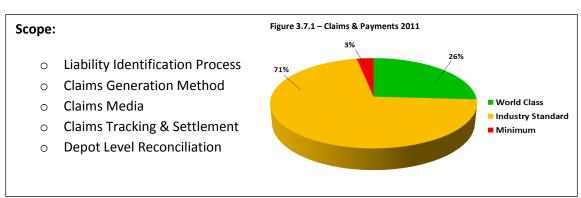
This is clearly a complex issue that needs many parties to work together to define the most suitable method at the overall firm-wide level.

3.7 Claims & Payments

Headlines

- Income: World Class 0% in 2007, 41% in 2011. Minimum Standard 43% in 2007, 0% in 2011
- Investment designed to automate the issuance of claims and claims tracking
- Provides opportunity to off-shore claims process

3.7.1 Overview



3.7.2 2011 Results

Overall, Claims and Payments was another category in which the overwhelming majority (71%) of participants were given an Industry Standard rating. Of the remaining respondents, a healthy 26% were awarded World Class, with only 3% falling into the Minimum Standard.

Fig 3.7.2 below clearly shows that there is a big disparity between the results for Income and Corporate Actions processing.

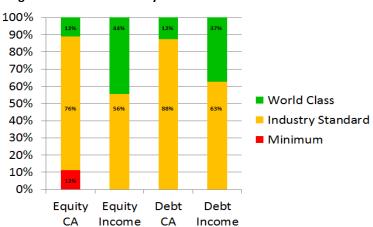


Figure 3.7.2 - Claims & Payments - 2011 Detail

In particular, Equity Income had the best results, with 44% of participants attaining a World Class ranking, whilst for Debt Income, this figure was 37%. None of the respondents was rated as Minimum Standard for either of the Income processes.

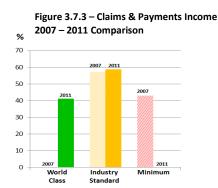
On the Corporate Actions side, only 12% achieved a World Class rating for both Debt and Equity processes. For Equity Corporate Actions, 12% fell into the Minimum Standard.

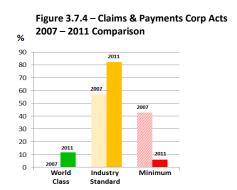
Our survey suggests that the focus of investment in this area is in automating the issuance of claims and the subsequent tracking process. The participants with the highest rankings for 2011 have implemented third party tools or developed in-house applications to achieve this, as well as working with their agents to increase the instances of automated compensation.

On the payments side, there appears to be a high instance of manual reconciliation of incoming MT566 messages According to our survey results, only two participants are currently automatically feeding these messages into their processing platforms to facilitate automated reconciliation.

3.7.3 2007 - 2011 Comparison

Once again (see *figs 3.7.3* and 3.7.4 below), there has clearly been a great deal of progress since 2007 for Claims Processing and Payments.





In 2007, over 40% of participants were given a Minimum Standard rating for both Corporate Actions and Income processing and none of the participants managed to achieve the World Class rating. This picture had certainly improved in 2011

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3.7.4 The Ibacas view

Once again, the use of mainframe systems on the Income side has provided the opportunity for improving the overall process. This has allowed these systems to efficiently integrate with either vendor-supplied or proprietary claims generation and tracking systems.

This has either not been possible, or is still a manually intensive process on the Corporate Actions side.

The fact that the vast majority of claims are generated as a result of Income event processing, means that it is logical to address this area first.

3.8 General

- Corporate Actions 0% World Class in 2007, 36% in 2011
- Highest incidence of Minimum Standard with 30% in 2011 largely a consequence of overall processing inefficiencies
- Manually intensive process created to address risk control concerns

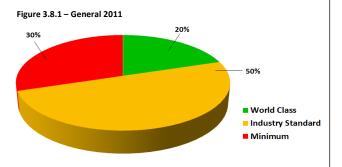
3.8.1 Overview

Scope:

In addition to the functional lifecycle processes detailed previously, the Ibacas survey also covered other functions that span the event lifecycle, or sit outside of the main processing hub



- MIS
- o Audit
- Tax Operations (Documentation, Reclaim Processing, Voucher Production etc)

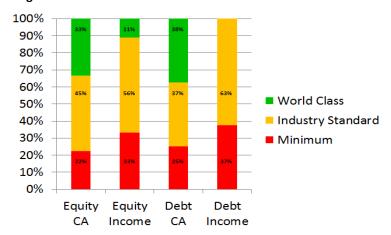


3.8.2 2011 Results

The findings in the General section revealed the biggest variance in all of the categories in the survey. Overall, 20% of the participants achieved a World Class rating, whilst 30% fell into Minimum Standard, with the remaining 50% rated as Industry Standard.

When we look at these findings in more detail (see *fig 3.8.2*) we see that the Corporate Actions related processes are slightly more advanced than those that support Income events processing.

Figure 3.8.2 - General - 2011 Detail



This variance in results is hardly surprising. As we have seen previously, there is a mixture of automated, remote and manual systems within the participants' Operations groups, for processing the various stages of the event lifecycle.

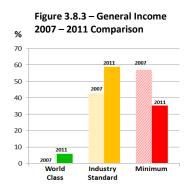
When the majority of processing is executed manually, it will mean that any audit, workflow or MIS will also need to be handled manually (or at least collated manually).

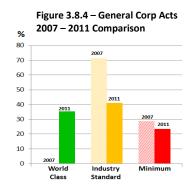
When there is high use of remote systems, additional effort will be needed to collate all of the required information.

When centralised, automated systems are in place, there is more opportunity to improve the efficiency and scope of the cross functional processes.

3.8.3 2007 - 2011 Comparison

There has been progress since 2007:





The pattern of progress in this category is as diverse as the detailed 2011 results were.

It is good to see that for Corporate Actions, the number of participants awarded a World Class rating rose from 0% in 2007 up to 36% in 2011. However, it is disappointing to see a very small change in those respondents falling into the Minimum Standard.

On the Income side, there has been a big reduction in the Minimum Standard ratings awarded. However, there were still 36% of participants in this category in 2011.

3.8.4 The Ibacas view

It is clear that considerably more focus has been placed on addressing issues relating to Corporate Actions processing in this category. In an environment where underlying systems are often aged or non-existent, it makes sense to add as much control and visibility (through MIS and Workflow, for example) to those processes with the highest levels of inherent risk. Often these control processes themselves require high levels of manual intervention, or are managed and executed in remote tools.

Bearing in mind the high level of potential risk exposure in Asset Services, this trade off in favour of improved risk control at the cost of reduced operational efficiency is essential.

Until improvements are made to the overall processing lifecycle functions, it is unlikely that any improvement in this category will be achieved.

4. Conclusions and looking to the future

4.1 Conclusions

Significant improvements have been made in terms of improving the Asset Services process since 2007. In particular, the top tier Global Investment Banking community has improved the Announcement process via smart uses of data and technology, as well as via the development of best practice guidelines. However, the further down the lifecycle we move, the less sophisticated the process becomes. Downstream processes are currently dominated by high risk and high cost manual interventions and workarounds.

The biggest barrier to hitting the World Class standard stems from the internal books and records issue. Without accurate and/or automated entitled positions and updates it becomes difficult and expensive to introduce significant STP processing downstream.

The fact that each firm has a different accounting and Books & Records set up, makes it hard to develop a workable business case for buying an off the shelf solution. Self builds seem to have the best results in the Investment Banking world but are costly and time consuming. This creates issues when trying to develop realistic business cases and therefore hampers the ability to secure the appropriate level of funding over an extended period of time.

Consequently, and quite appropriately, the vast majority of available investment has been used to focus on improving the client experience (portals etc.) and developing robust control processes to address inherent risk exposure. Unfortunately, this still leaves a largely inefficient and non-scalable underlying process. Client Service has improved significantly in recent years, but there is still a "Last Mile" problem with regards to the creation of a fully automated process.

Managers have done an excellent job of controlling the process with limited tools but as the focus on costs continues, along with additional pressures to meeting increasingly stringent regulatory demands, it will become harder to successfully manage the process without increasing potential risk exposure and/or impact the level of client service offering.

Advances in the automation of income processing have led to efficiency improvement and cost reduction opportunities. Many firms have moved the more straightforward processes to near or far shore locations (eg claims, mandatory events). However, the inherent high risk associated with the complex functions around elective events, means that these functions have universally remained in the traditional processing centres (London, NY, HK). If everything remains the same it is difficult to see where cost can be cut further without significant impact on risk management.

The participants that we interviewed during our survey were aware of the optimisation shortfalls in their processes. The biggest issue we found to addressing these problems was being able to secure the right level of funding.

4.2 A different approach

Given the Benchmarks logged in our 2011 survey, it will be interesting to see how much of the shortfall can be tackled over the next few years and also if additional automation and cost-saving efficiencies can be brought to bear on the Corporate Actions and Income processing space.

The economic climate, along with the intense gaze of regulators and clients, will put pressure on Top Tier players to cut costs, to improve operational efficiency and to improve customer service. This must call for investment – but investment in which a relatively rapid ROI can be demonstrated.

In a changing market environment, Asset Services managers need to change their approach to producing business cases aimed at securing funding for improvement to help optimise their processes.

The main issue that Asset Services managers face when trying to create compelling business case arguments is that of attaching a monetary value to the level of risk exposure that is associated with the process at any point in time – unless they have been unfortunate to have made an operational loss. It is fairly straightforward to identify any efficiency savings and associated cost reductions that can be realised with a proposed solution delivery. However, accurately stating a monetary reduction in risk exposure from the same solution is not really possible. Accordingly, half the benefit side of the business case is not able to be included and this makes securing the required level of funding very difficult.

As stated previously, one of the main barriers to improvement is that lack of a centralised Stock Record. Across the market in general, and also with the various local regulatory bodies, there has recently been an increased focus on managing Enterprise Data more effectively. A common centralised Stock Record must fall into this category as it is a critical factor in providing a reconciliation point against an organisations P&L evaluation, as well as tracking counterparty exposure.

If the Stock Record issue can be resolved within the Investment Banking world, it will go a large way to improving the opportunities for developing a more efficient Asset Services process, using more automated, centralised platforms.

It is unlikely that a realistic business case for delivering this core functionality can be made purely on the benefits that would be realised within Asset Services. It is imperative that cross departmental communication is improved to allow those areas that are impacted to develop a

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cohesive firm-wide business case for delivering such solutions. Only then will senior management have the level of information required to make the correct decisions and allocate funding appropriately.

This type of collaborative approach needs to take place with the client facing business units and the front office groups as well. Too often, Asset Services is "forgotten" when these groups develop their strategies. Including Asset Services requirements at the early stages in these processes will go some way to ensuring that the true cost of new business is fully recognised by all relevant parties. This may go some way to preventing those instances when a new business line is introduced and the impact on Asset Services has to be absorbed with minimal notice and using the existing available resources.

Managers also need to look more closely at the regulatory impact of their processes. For example, our survey observed that there is a tendency for firms to execute reconciliation processes after the event, rather than in advance. This may have an impact on the daily reporting of P&L for certain organisations, as well as often leading to higher instances of incorrect actions being taken, an increase in risk exposure and an overall increase in processing costs. All these kinds of factors need to be built into business cases for change.

In essence, Asset Services managers generally know how their processes impact, or are impacted by other areas of their organisations. Only when the true effects of the sub-optimal processes within Asset Services are known and included in the business cases that are presented to senior management is it likely that any significant funding will be allocated to this long overlooked function.

5. Appendices

5.1 Appendix A: Further information on Ibacas

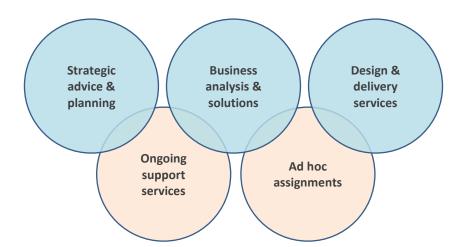
5.1.1 Client challenges

We help Asset Services clients facing challenges such as:

- How best to standardise and scale existing operations
- How to reduce inconsistencies, errors and exception-processing
- How to improve the quality of the service they deliver
- How best to speed up and automate operations and processes
- How to take cost out of existing operations on cost-per-transaction basis
- How to reduce risk within their processes and overall operations
- How to ensure regulatory compliance
- How to retain key individuals

5.1.2 Our services

We tailor our response to each client's particular strategic and operational challenges, drawing on a core set of services:



We understand that the right solution is not always about technology or the latest software. As we seek to improve operational performance, we also scrutinise people, processes and cross-functional relationships. It is this holistic approach that our clients value.

5.1.3 Deep sector expertise

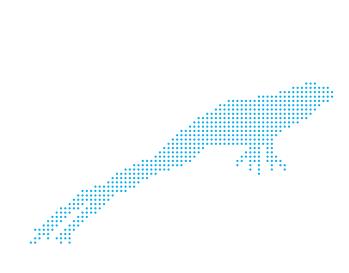
The three founding directors all have deep sector experience. And all have long standing personal experience of delivering optimisation projects for Asset Services clients. As a result, at Ibacas, we all have an instinctive, first-hand sense of the unique challenges that our clients face. We live and breathe their processes. We understand the part that both people and technology play in their operations. We understand their challenges because we've stood in their shoes.

This inside-insight is the reason why clients from blue chip financial services organisations choose to work with Ibacas – a boutique consultancy – rather than with some of our larger competitors.

Experience delivers insight. Experience creates confidence and knowledge. But experience is also about speed and quality of delivery. Because we come from the inside, we know what it takes to deliver efficiently, effectively and – crucially – on time and on budget.

5.2 Appendix B: Ranking criteria

	Ratings	—	-	_
GENERAL	gs OPS Benchmarks	User Configurable automated Workflow process Read-time user configurable MIS Reporting Calmis and Clean-up within 10 days Automatically integrated downstream lax systems	► Automated Workflow process ► Automated user configurable IMS Reporting tool ► Claims and Clean-up within 15 Days ► Automated production and tracking of lax reclaims	Harual darisest Vlorkfow procedures / process Harual Mis Reporting Harual Claims Tracking Calems and Clean-up 30 Days of greater Manual production and tracking of fax recisions.
	Rating		х в	
CLAIMS & PAYMENTS	gs OPS Benchmarks	Automated daim and lability generation Single source automation of daim / lability details Automated exception-based Claims tracking system Fully integrated payment settlement system settlement system	➤ Automated triggers for manual creation of claims and labrillities ➤ Claims managed in enternal system from processing platform ➤ Matrice source systems used for collation of Claim and Labrillity generation ➤ Manual status of claims tracking	Manual clain and lability process reactive to bookings process Panual management of claims tracking using external tools Manual management of downstream claims settlement process
	Ratin		5	7. 0
BOOKINGS	OPS Benchmarks	Automated posting of accruals and payments Automated exception based booking Reconcilations Single destination of bookings NSO 15022 / 20022 complant Automated caskella processing (MT564, MT569) Auto adjust of late trades / multi ournency payment functionality	Adomated trigger and manual posting of accural and proments Multiple booking destination— Frort and Back Office with post booking reconciliations Authornalled updates to posting abased on postition / static / amouncement updates Bookings posted upon agent confirmation Manual break investigations with automated exception-based reconciliations	Manual posting of accusal and payments Manual updates to entitlement postings based on postition / static amnuncement updates Mookings posted from actual receipt of entitlement receipt of entitlement
NO	Ratings			<
ENTITLEMENT CALCULATION	OPS Benchmarks	Automatic entitlement calculation receipt date receipt date automatically sourced from single source source automatically update entitlement automatically obtained and the few fews. Favy automatica application of the few law fews. Favy and cash in few to SMPG guidelines. Automated application of tax calculation metabring has receim processing and benficial owner details.	Maual entitlement calculation on first ley date automatically sourced from multiple remote systems. Automatic rigger to manually update entitlement resulting from update entitlement essulting from update entitlement danges. Automatic riternal and external rescondistion. Automatic Manual application. Automatic Manual application of cash in less to SMIPO guidelines. Semi automated application of tax calculation, matching tiles. Receipm processing and berificial owner details.	Manal entitlement cacuation when booking process triggers between the process triggers and the process triggers and the process triggers and the process triggers and the processing the processing the processing the processing and benficial owner details feet, FA and cash in least the processing of the processing and benficial owner details
z	Ratings			
ELECTION & INSTRUCTION	gs OPS Benchmarks	Auto receive and record electors within processing platform electors within processing platform. Auto send SWIFT, Potal; File Format and non-formalted risituctions Auto allocation with Auto electors only validation of electors.	Manualy received and record electrons within processing platform A Manualy send SWIFT and non-formatted instructions Authing to receive SWIFT and non-formatted electrons only Mun authorities and selections with manual validation of electrons Waldation of electrons Waldation of electrons	Manualy received and record electrons using remote book Manualy send non-formatted restructions Manual you need to non-formatted electrons only Manual allocation of electrons Manual transition and releptrelation of formatted messages
	Ratin	y P	8 S9 PL	
NOTIFICATION	s OPS Benchmarks	Auto creation from processing platform real time Auth notification types as per SMPG Guidelines Client mannamable preferences by COI/ Event Type Variable Deadline tassed on client up to agent deadline Novi-Formatted notifications Novi-Formatted notifications	Ado ceation from local source systems intraday Confirmed. Key Date and Deadine Notifications only Ability to apply clert preferences Client Deadine between 24 and I hour prior to agent deadline SWIFT and Non-Formatted	Manual creation from local source systems Key Date and Ad Hoc Notifications only No client preference offering Client Deadline is greater than 24 hours before agent deadline Non-Formatted notifications
	Rating		E	9
POSITION CAPTURE	ings OPS Benchmarks	Automatic Position Capture from Certralised Stock Record from Amounterment Capture Date Produces in position capture process Picula Denvalene related products in position capture process Pical Time position updates Pala stored within centralised position database All relevant tax rates (including SLI, positions / trades) determined and applied automatically, prior to exide and applied automatically, prior to exide and External reconciliations.	► Automatic Position Capture from mutiple source systems from First Key Date ► Automatic Position Updates ► Positions stored in processing pleatform ► All netwant tax rates (including SL) positions / fractes determined and applied manually ► Automated Internal and External Reconciliations	Manual position gathering from first Key Date Multiple source systems for positions Manual monitoring for position updates Positions stoled locally in remote systems Pal melvant tax rates (including SIL positions frades) determined and applied manually Reconclisations performed
ω	Raffi		hent	0 B 5 P
ANNOUNCEMENTS	Ops Benchmarks	Store within Certraised entippises wide Amouncement databases Equity, Fixed Income and Derivative related amouncement Derivative related amouncement Exception based Auto validation process upon amouncement receipt.	Multiple Auto amountsment feeds received feeds received Auto validation of amountsment prior to first key date prior to first key date Amountsments stored in processing platform Equity and Freed Income Products ISO 15022 / 20022 fornat compliant.	Manual Amouncement set up based on Agent/ Depository feed based on Agent/ Depository feed only Manual Data validation & enrichment Amouncement Record stored locally
Service	Criteria	MORLD CLASS	<u> </u>	МПМІМ



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