

Fast payout study – final report

November 2008

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1. Executive summary

As part of their response to recent events in the banking industry, the UK authorities have identified a need to provide more effective compensation arrangements to customers of failed banks. It is critical that consumers have confidence in the Financial Services Compensation Scheme (FSCS) and are confident that they will receive fast compensation payout. One of the key objectives in the banking reforms is therefore an indicative target of 7 days, to provide the majority of customers with payout or access to their compensation monies. This 7 day period starts from the date of failure / default of the bank in question and not from the point of the subsequent verification of compensation data by the FSCS.

In August 2008, the FSA together with the BBA and the FSCS commissioned a study to review the costs and benefits of various options for speeding up FSCS compensation payments to depositors. Ernst & Young LLP was appointed to undertake the study working alongside the FSA, the FSCS and representatives from the UK financial services industry including the BBA, BSA and a number of deposit-taking firms (the "Study Banks"), who have provided cost impact assessments for the various options. The output from this study will be shared with the industry and used by the authorities to inform future policy decisions relating to depositor protection.

Context of fast payout in the broader banking reform

The tripartite authorities (HM Treasury, the Bank of England and the FSA), are working with the FSCS to review the UK framework for depositor protection and financial stability. Three consultation documents have been published this year and the Banking Bill (the Bill) was put to Parliament on the 7th October 2008.

The Bill would give the tripartite authorities a number of tools to resolve a bank failure. The proposed toolkit includes options that would enable the authorities to ensure continuity of banking services to consumers, as well as the option of fast FSCS payout. This report does not make any assumptions as to which tool the authorities may use in any given situation; this will always be a decision for the authorities. Our assumption is that all the tools envisaged by the Bill (including any resulting from subsequent FSA rule changes), should be available to the authorities in all scenarios. This report considers the costs, benefits and the feasibility of delivering one of those potential tools, namely fast payout.

Key questions addressed in this study

In summary, the objectives of this study include addressing the following key questions:

(See appendix A for key definitions)

- ▶ How could the speed of compensation payout be improved towards the target of 7 days for the majority of customers should any bank fail in the future?
- ▶ What are the costs/benefits and challenges associated with the policy options for speeding up the payout process including: using electronic account flags, banks creating a single customer view (SCV), paying out by Brand/Authorised Entity or Gross/Net basis?
- ▶ What are the costs/benefits and operational challenges associated with various models for execution of fast payout should it be necessary in future bank failures?

Ernst & Young's approach

Ernst & Young has used a structured approach (as outlined in this document) to address these questions. Based on input from the Study Banks, we have reviewed the cost of setup and maintenance work which would need to be undertaken by deposit-taking firms to support the transition to fast payout as well as the challenges associated with various end-to-end models for executing payout or access to compensation funds.

As part of the study, Ernst & Young gathered cost and impact information from the Study Banks. These Study Banks cover various segments of the industry from small building societies, through to mid-sized banks and large high street banks. In total the Study Banks which provided data for this analysis held 41% of the total UK protected deposits. A structured extrapolation approach was used to estimate overall industry setup and maintenance impact from this base.

In seeking to understand the full range of costs, Ernst & Young worked with the FSCS to estimate the scale of any associated changes to its infrastructure and to assess how the different options might impact the scale of fund payout should a bank fail.

We have included, within the study, analysis relating to the wider benefits of moving from the current FSCS model to a fast payout environment.

Summary of findings for setup and maintenance of fast payout

The key findings from this study in relation to fast payout setup and maintenance:

- ▶ *Data Cleansing* – Cleaning and maintaining customer data such that all eligible customers and accounts can be appropriately identified and matched for FSCS payments is a fundamental requirement but a major challenge for the banks. Our study indicates that for large banks, data cleansing costs are likely to be over 20% of the total industry setup and maintenance cost of a fast payout solution (£191m – £243m), with a significant portion of this focused on maintaining appropriate records for small business accounts.
- ▶ *Electronic FSCS eligibility flags* – Electronic data flags on FSCS eligible accounts are cost effective and essential for fast payout. The estimate industry cost for the eligibility account flags is approximately £135m.
- ▶ *Creation of bank based Single Customer View (SCV)* – Creating a fast payout based SCV, which can be used to facilitate payout, is expensive (£432m - £530m) but is a critical component of establishing quickly the correct individual and overall compensation obligation at a given point in time. To gain commercial benefits from an SCV, banks would require a richer set of data than would be required purely to support fast payout.
- ▶ *Limits by Authorised Entity/Brand/Account* – Moving to limits applied by account, from the current basis of Authorised Entity Net, would provide for much lower setup and maintenance cost. However, payout by account would result in higher eventual compensation payouts and the increased payout from the fund would cost banks significantly more in levy fees (c. 30 – 50% increased payout based on current data). The costs for payout by Authorised Entity are, on an industry-wide basis, slightly more expensive than by Brand but the difference is not great, and as such the policy decision should rest on other criteria.
- ▶ *Payout on either a Net or Gross basis* – Given the additional data requirements and calculations, the Net based payout approach would be significantly more expensive than a Gross based solution (c. £135m more). Our research, and feedback from most Study Banks, would also suggest that a Gross based payout would minimise customer hardship and facilitate more effective access to liquid funds. It should be noted that a move to Gross payout will, however, increase the initial payout requirement from the FSCS fund.

In assessing the timescales required for setup and maintenance work, the Study Banks have generally concluded that they will require an 18 month transition period, after the point at which the policy is defined for fast payout.

In addition, the current FSCS infrastructure could be adapted relatively cost efficiently (c. £1m) to have the capability necessary to operate a fast payout scheme calculation or to enable a parallel testing environment for checking the accuracy of bank data and processes.

If the FSCS performs the payout calculation, instead of the failing bank, Study Bank estimates indicate that, the total industry setup and maintenance costs saving could be in the order of between £60m and £150m.

Summary of findings for fast payout execution

To assess how fast payout could be executed, primarily as an option within the Special Resolution Regime (SRR) toolkit, we outlined four potential end-to-end models for execution that were reviewed by the Study Banks. The models, two of which originated from a BBA working group, provided a combination of methods for providing compensation payment either through the failing bank infrastructure or the FSCS. The following were considered to be key success factors for fast payout execution and have been used to assess the various models with the Study Banks:

- ▶ Limited customer hardship and managed access to liquid funds
- ▶ Accurate and timely customer payout or access to funds within 7 days
- ▶ Limited contagion risk to other banks
- ▶ Fast payout is completed with an acceptable fraud and risk profile

Given the diversity of scale and complexity of firms across the industry, our view is that a variety of payout execution models will be required. The model required for any particular instance will depend on the type of institution which is failing and the circumstances in which this is occurring. The key considerations are as follows:

- ▶ *Large Banks/Very large Building Societies* – The large banks hold a significant majority (over 70%) of all protected deposits, have a large share of current accounts and have a systemically important role in the banking system. In failure and should other SRR intervention measures not be successful, our study suggests orderly payout is most likely to be achieved by either providing access to or transferring current accounts, as well as arranging for payout on savings accounts. Whilst an interim payment or current account access may be delivered to the majority of depositors in 7 days, final settlement is likely to fall outside of the 7 day target due to the large number of bank accounts these firms hold and the likelihood that a significant number of customers will need to be contacted before final payment can be made.
- ▶ *Mid-Sized Banks/Smaller Banks/Building Societies* – Smaller Study Banks also identified significant challenges in many of the payout execution models. They considered that a cheque based payment, particularly with data transfer through to the FSCS, would work best, and anticipated the majority of customers would get their compensation in a 7 – 10 day period. For the limited number of institutions in this category with a significant number of current accounts, consideration should be given (as outlined above for larger banks), to providing either access to or transfer of these current accounts to an alternative institution.
- ▶ *Credit Unions* – Where good quality customer records have been maintained by credit unions, experience from previous FSCS payouts in this segment would indicate that the current process for paying out through the FSCS would meet the key success factors and allow the majority of customers to be paid in 7 - 10 days.

The study has identified a number of alternative solutions to support fast payout execution. These require further analysis to validate as there are considerable practical issues that would need to be resolved with each approach. The key alternatives identified include the following:

- ▶ *Use of pre-setup second accounts* – To avoid delays in transferring accounts and accessing banking services through an alternative banking provider, it may be beneficial

for the industry to encourage and help consumers to set-up alternative contingency bank accounts.

- ▶ *Central standby cheque production capability* – A central standby high volume cheque production capability, linked to the FSCS, may help to speed up payout and may be a cost effective solution to deal with any cheque based payout whether through the FSCS or through a firm.
- ▶ *Running down the bank through existing channels* – Some Study Banks have suggested a model for intervention similar to that undertaken by the FDIC in the US. The FDIC operates a payout process by running down a bank and this may be less costly in terms of setup and maintenance costs than fast payout. There are concerns from others about how long this might take and the operational impact. Further work beyond the scope of this study would be required to form a more definitive view on this.

Summary of benefits analysis

The study identified a number of benefits associated with the implementation of a fast payout environment irrespective of the solution policy choices to achieve fast payout. These include the following:

- ▶ *Consumers* – In the event of bank default, and up to the FSCS limits, consumers will benefit from waiting less time before having access to their compensation monies. This will minimise consumer hardship, reduce the possibility of contagion and help to maintain public order.
- ▶ *Banks* – If consumers have confidence that compensation payout is both accurate and timely, they may be less likely to withdraw their funds from a failing bank. By withdrawing deposits from a failing bank, consumers unwittingly compound the problems facing the bank. This makes the other options under SRR more difficult to implement as the failing bank's residual value becomes eroded. For some banks, the fast payout SCV could provide a base from which additional business benefits could be generated beyond those directly related to depositor contingency planning.
- ▶ *FSA/FSCS* – Fast payout would provide the authorities with more data to support decision-making, with respect to other tools within SRR, to maintain financial stability, protect public finances, and protect depositors. The improved accuracy of data associated with an FSCS based SCV developed for the purpose of payout could be used to more accurately align levy calculations which would then be more in line with the actual exposure of an institution to their eligible customers.

Additional policy considerations

This study identified a number of important operational challenges associated with fast payout execution planning. To gain greater insight into these issues, we recommend further work in relation to specific account treatments, payout prioritisation and cross-border execution. Resolving these areas may help improve the speed of compensation payout. Specific issues which should be considered include:

- ▶ Separation of the treatment of current accounts from general deposit accounts in the planning and execution of fast payout
- ▶ Treatment strategies for tax exempt accounts (ISAs) within any fast payout solution which ensure customer tax benefits are preserved
- ▶ Rules supporting the prioritisation of accounts and limit application (e.g. Priority order: Current account/ISA/Savings) where total deposits exceed the FSCS limit
- ▶ Guidance to banks on the treatment of in flight transactions (see Appendix A for definition) to allow either a second wave of payout for the affected customers or alternative solutions that would provide accurate final total compensation payment

- ▶ Further consideration of how fast payout would operate where UK banks have EEA passported branches and where non-UK based banks are topping up into the FSCS.

Summary of findings and overall conclusions

The following table provides a summary of key findings in relation to impact on payout speed and relative cost for each of the key solution components:

Table 1: Summary of relative costs and impacts by key component

Component	Ernst & Young perspectives	Impact on payout speed	Relative Cost
Eligibility Account flags	<ul style="list-style-type: none"> ▶ Eligibility flags on accounts are considered relatively low cost and key to fast payout. ▶ Complexity of creating and maintaining eligibility flags is mainly for small business accounts. ▶ Data extraction algorithms are capable of using combinations of existing flags (e.g. dormant, dispute) to quickly filter FSCS eligibility and core retail accounts for fast payout. 	High	Low
Eligibility Rules	<ul style="list-style-type: none"> ▶ The current rules regarding eligibility create a cost impact in dealing with exceptions. Current bank systems find it challenging to identify and link small business customers to related personal accounts. ▶ Simplifying and providing support for consistent interpretation of rules would reduce setup and maintenance costs. 	Low	Medium
Limits by Authorised Entity, Brand or Account	<ul style="list-style-type: none"> ▶ Payout on an account limit basis is cheaper to setup and faster to execute. However, the FSCS fund payout under an account limit basis could be significantly higher (c. 30 – 50%). ▶ Our study shows that there is only a small difference in setup and maintenance cost between Brand and Authorised Entity. The key driver of cost is the number of source systems and associated complexity. ▶ Greater alignment of Authorised Entities and Brands would help consumers to avoid unintended risk taking. 	High	High
Single Customer View	<ul style="list-style-type: none"> ▶ Creating an effective SCV is a key component in accurate fast payout under any solution where a limit is applied. ▶ SCV is costly particularly for larger banks which have a multitude of systems. ▶ Requirements for fast payout SCV are a subset of what would be needed for a solution to provide banks with significant direct business benefit from the investment. 	High	High
Gross vs. Net payout	<ul style="list-style-type: none"> ▶ Creating a Net SCV is significantly more expensive (by c. £135m) to implement than a Gross solution, but the initial fund payout could be much lower under a Net solution. ▶ Gross payout is likely to be quicker and would mitigate significant consumer hardship which may otherwise occur. 	High	High
FSCS process and infrastructure	<ul style="list-style-type: none"> ▶ Current FSCS systems and operating models can only directly support payout to smaller institutions (e.g. Credit Unions) within the proposed 7 day timescales. ▶ Improved access to bank data and industry setup and maintenance for fast payout should allow options for either failing bank or improved FSCS infrastructure to provide automated payout to the majority of customers. ▶ The costs for upgrading the FSCS infrastructure are not significant to the overall cost of fast payout (under £1m). 	High	Low

In summary our study findings indicate that through investment in technology and improved data management it would be possible to speed up FSCS compensation payments to depositors of a failing bank. Introducing fast payout is likely to have a positive impact on consumer confidence, although we recognise that as an intervention option to deal with failing banks compensation payment is likely to interfere with the continuity of some banking services to many impacted customers.

The findings from this study lead to the following key considerations in relation to fast payout objectives:

- ▶ *Costs* - The results from the study indicate that there is a significant potential cost to the banking industry (c £0.4bn - £1.0bn). The total industry setup and maintenance cost is dependent on policy decisions being taken, to settle the basis for payout, and operational requirements placed on deposit takers to effect payout.
- ▶ *Benefits* - There are however major benefits to be gained from delivering payout by whatever mechanism in 7 days. Most important of these, perhaps, are the benefits to consumer confidence, associated with greater certainty that, if payout was required, the majority would gain access to their compensation in a matter of days rather than weeks or months. As outlined in section 7 of this report this in turn could lead to very significant wider economic benefits.
- ▶ *Time to effect changes* - Our study suggests that the banking industry and the FSCS would need an 18 month transition period to a fast payout environment and that further work, particularly in relation to policy and guidance on overcoming the operational challenges of execution is required to ensure fast payout can deliver the stated key success factors.

In conclusion, we believe this study has met the objective of providing the authorities and the industry with further insight into the indicative costs and associated challenges of fast payout of FSCS compensation. We trust that it will help the authorities to further progress consultation and policy decisions required to strengthen depositor protection. To complete this study we have relied on the support of a number of parties. We would like to thank them and in particular the BBA, BSA, FSA, FSCS and the Study Banks for their contribution to this review.

2. Study background and context

This section contains a summary of the background and context for the fast payout study, including how this study fits into the wider consultation (financial stability and depositor protection) process which is being undertaken by the authorities (FSA, Bank of England, HM Treasury). It also provides an overview of relevant elements of the current FSCS scheme and payout process and highlight some of the associated challenges of achieving fast payout.

2.1 Background and introduction to this study

Given recent events in the financial markets and bank failures both in the UK and internationally, the authorities are consulting to address the following key policy objectives:

1. Strengthening the stability and resilience of the financial system in the UK and internationally
2. Reducing the likelihood of individual banks facing difficulties
3. Reducing the impact if a bank were to get into difficulties
4. Providing effective compensation arrangements in which consumers have confidence
5. Strengthening the Bank of England, and ensuring effective coordinated action by the Authorities.

This study focuses on issues relating to objective 4. It specifically assesses the costs and benefits of various options for providing fast FSCS payout. Fast payout is defined, for the purposes of this study, as payment or access to compensation monies in a bank failure for the majority of eligible depositors within 7 calendar days.

Fast FSCS payout is just one of the options in the resolution toolkit which the authorities are progressing in their consultation to strengthen the framework. However, the banking industry has indicated that there would be significant IT, infrastructure and operational costs associated with building the capability to deliver fast payout. To gain further insight into how fast payout could be achieved, the FSA appointed Ernst & Young to assess the costs and benefits of various solutions to achieve fast payout.

To assist understanding of the industry impact, and following discussion with the BBA and the BSA, a representative group of banks and building societies (Study Banks) were selected to participate in the project. This work has therefore been led by Ernst & Young with considerable input from the FSA, the FSCS, the BBA, and the BSA and in particular from the institutions that form the Study Banks for this analysis.

This report takes into consideration the following three factors:

1. Analysis of the data provided by the Study Banks
2. Impact of fast payout on the FSCS
3. Effect of fast payout on the broader financial system.

This report may be published by the FSA and will be used by the Authorities as an input to policy discussions, relating to financial stability and depositor protection. The report has been prepared by Ernst & Young for the sole use of the FSA. It is not provided for any other purpose, and to the fullest extent permitted by law no liability is accepted to any third party with respect to its contents.

There are separate but related consultation activities in progress to establish a resolution toolkit which could be used if a bank were to fail, to consider ways to raise consumer awareness of the FSCS and to review compensation limits. The authorities are also considering options for dealing with temporary high balances exceeding the compensation limit. These high balances may also exist in client accounts held by solicitors and other such professionals.

2.2 Key objectives of this study

The fast payout study began in mid-August 2008 building on some previous work undertaken by the Authorities and the BBA and concludes with this report.

The key objectives for the fast payout study were to assess:

- ▶ How fast payout could be achieved against the Authorities target of accurate and orderly payout of compensation to the majority of eligible depositors within 7 days of any bank failure
- ▶ The costs, benefits and challenges associated with the various options for policy and operational changes for speeding up FSCS compensation payout including:
 - ▶ Electronic flagging of FSCS eligible accounts to enable the FSCS and banks to quickly identify those customers who are entitled to claim under the scheme
 - ▶ Creation of an SCV to provide an aggregated view of compensation entitlement whether calculated on a gross or net basis and whether aggregated across authorised entity or brand.
 - ▶ Application of the FSCS limit by account rather than by brand or by authorised entity,
- ▶ The costs and benefits and operational issues associated with various models of executing compensation payout either through the failing bank infrastructure or using revised fast payout processes within the FSCS

2.3 Wider context to fast payout

The following sub-sections provide further context to the fast payout study by providing a summary of the current FSCS payout process together with an overview of European and international perspectives.

2.3.1 Current FSCS payout process and related challenges for fast payout

The current FSCS payout framework and payout process is constrained in its ability to meet the challenges of fast payout. Current scheme rules, processes and infrastructure would not support fast payout or access to compensation for the majority of eligible customers in 7 days in the event that a large high street bank or building society failed.

However, if a smaller institution such as a credit union with up to 10,000 accounts failed, provided the FSCS got early access to that institution and provided the failing firm had good quality records, the current process should complete payout to the majority of customers in 7 to 10 days. Also if contingency capacity arrangements were invoked by the FSCS and if initially compensation was only provided to the majority of customers on instant access products, current FSCS based processes could effectively deal with the failure of an institution with up to 200,000 accounts within 7 to 10 days. Where payout was provided on this basis, compensation for longer fixed term products and for customers whose claims could not be verified quickly (e.g. accounts in dispute), would be paid at a later date. Payment would be actioned when monies were due and claims were duly verified.

Key constraints that limit the speed of compensation payment are outlined in Table 2:

Table 2: Key current payout constraints and considerations

Current speed of payout constraints	Fast payout considerations and approach
The FSCS does not currently have access to failing banks and their data until after the institution has been declared in default, limiting the time the FSCS have to prepare.	As part of the wider reforms the FSA and FSCS are seeking to gain early access to relevant data from distressed banks. As part of the fast payout proposals, banks will be required to test and allow the FSA and/or the FSCS to gain assurance that their plans are sufficiently robust and the quality of data impacting payout is sufficient.
Customer eligibility for FSCS compensation needs to be manually assessed post bank failure.	This review contains analysis of the costs and benefits of electronic flagging of FSCS eligible accounts to aid the speed and accuracy of payout.
Lack of common unique customer identifiers within many UK banks (such as the social security number as used by the FDIC in the US) slows down calculation of compensation across multiple accounts held by a customer.	A key element of this study is to review, with a cross section of Study Banks, the costs and benefits of creating a Single Customer View (SCV) to allow faster calculation of individual compensation. To underpin the creation of an SCV and facilitate fast payout this study also looks at the cost and benefits of the data cleansing required across existing banks' systems to allow the required matching of accounts held by a customer.
FSCS compensation for banks is currently on a Net basis which results in a time-consuming process whereby all loans (including outstanding mortgage commitments) and deposit accounts have to be identified and aggregated. A calculation then has to be done of the customer's Net position prior to payout of any balance under £50,000 per individual.	As part of the banking reform consultation process, a potential move from a Net to Gross payout is being considered. The costs, benefits and impacts related to this change and, in particular, the potential influence on payout speed, are considered within the scope of this study.
Aggregation of deposits and loans is currently done across an Authorised Entity level which can be time consuming if a bank has multiple deposit-taking business areas (or Brands) that need to be consolidated to establish total compensation per customer.	Within the banking reform consultation there is also a review of whether to move from aggregation and payout based on an Authorised Entity to arrangements based on Brand, or limit by Account rather than customer. This study has reviewed the setup costs and speed of payout implications of these options.
Under the current rules the FSCS is required to calculate and pay out compensation to customers. As part of the banking reform consultation, it has been suggested by a number of parties providing feedback to the authorities, that payout through a failing bank's own infrastructure may be a more effective option.	This review considers both the banking industry and the FSCS costs for setup for fast payout. In addition it looks at the potential costs and challenges associated with fast payout execution using various models based on payout through either the FSCS or via the failing bank's infrastructure.
The FSCS currently relies on claim forms being sent to and completed by customers, which must then be returned for checking against the failed bank's records.	A design principle of the potential move to fast payout is that it should primarily be a pre-setup automated solution where for the majority of customers, there would be no need for manual intervention or claim forms in the payout execution process.

2.3.2 European and wider international perspectives on fast payout

We have outlined below the relevant context for the fast payout study and potential changes to the FSCS in the context of existing European and wider international provisions for depositor compensation.

Consumer confidence is considered to be influenced by the capability for fast payout, but also by the actual limits and maturity of the scheme. This study has considered these areas and other schemes as appropriate, to form views on the proposals for fast payout. We recognise that consumer awareness of the FSCS and general depositor concerns around deposit protection and compensation, has increased through the recent events in the financial markets.

The actual level of the FSCS limit it is not considered to be a factor in fast payout, other than its impact on the fund payout associated with a given bank failure. The current FSCS limit of £50,000 compares favourably for consumers against the revised EC Deposit Guarantee Scheme Directive of a minimum of €50,000 (which may be increased to €100,000 through

amendments to the Directive). Separate FSA consultation to further review FSCS limits was published in October 2008. Changes have been made in other countries such as Ireland, where the compensation limit has been significantly increased to €100,000 and 100% deposit protection is being provided for a number of banks, for a period of 2 years.

The US FDIC is one of the most mature deposit protection schemes globally with a complex structure of limits based around a revised \$250,000 limit per category of account. The FDIC limit may be further amended. A limit by account category can allow a significantly higher level of overall coverage of insured deposits for a given individual. By comparison to the FSCS, the FDIC has wide powers of intervention itself (in some ways similar to the SRR proposals for the UK Authorities). Where a sale or transfer of deposits has not been possible, the FDIC runs existing channels to pay compensation.

3. Overview of study approach and methods used

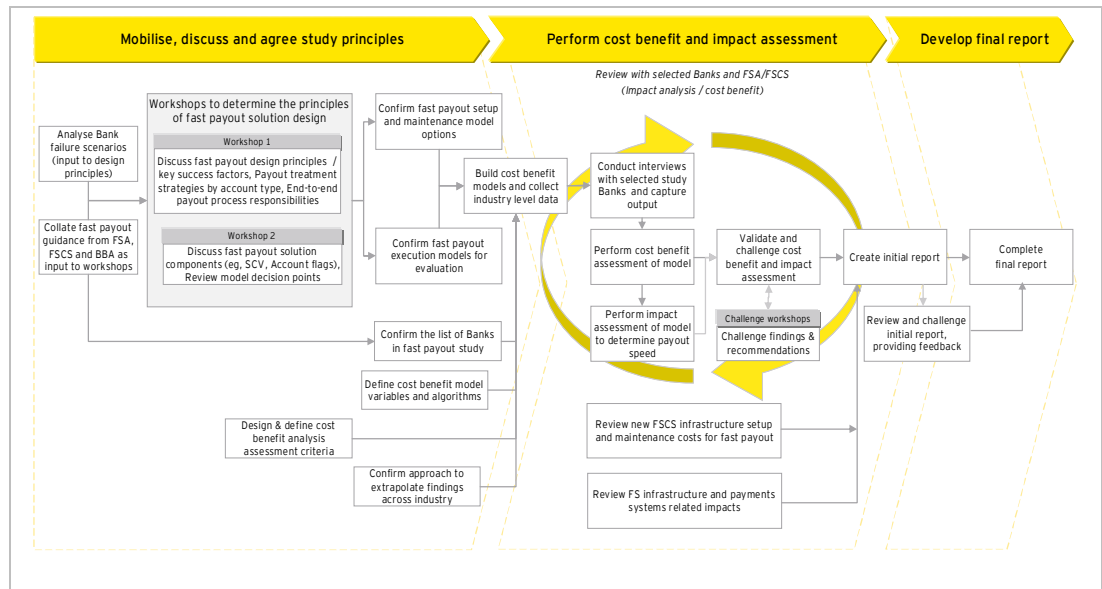
This section provides an overview of the approach and methods used to undertake the fast payout study.

3.1 Overarching fast payout study approach and method

The high-level approach as shown in Figure 1 below highlights the three key phases within the study:

- ▶ **Mobilisation and Study Design** – This builds on previous work undertaken by Ernst & Young, the FSA, the FSCS and the BBA to establish design principles for the fast payout analysis. A series of workshop sessions were undertaken to discuss and agree relevant design principles for the study. The workshop sessions also refined the fast payout solution framework to be used in the study and agreed the dimensions of the financial analysis model.
- ▶ **Cost/Benefit and Impact Assessment (assessment phase)** – A group of Study Banks provided data which has been used as input to a financial model to create industry-wide estimates. This analysis includes relevant quantitative and qualitative impact assessment for the setup, maintenance and potential execution of fast payout. In addition to obtaining a view of the impact on the banking industry further work has been undertaken to assess the impact to the FSCS and related elements of the overall financial services infrastructure (e.g. payment systems).
- ▶ **Development of Final Study Report** – Our work is completed by the production of this report which is based on aggregation and analysis of the data provided, together with further discussion with relevant parties on the key findings and related conclusions.

Figure 1: Ernst & Young’s Fast Payout Study approach

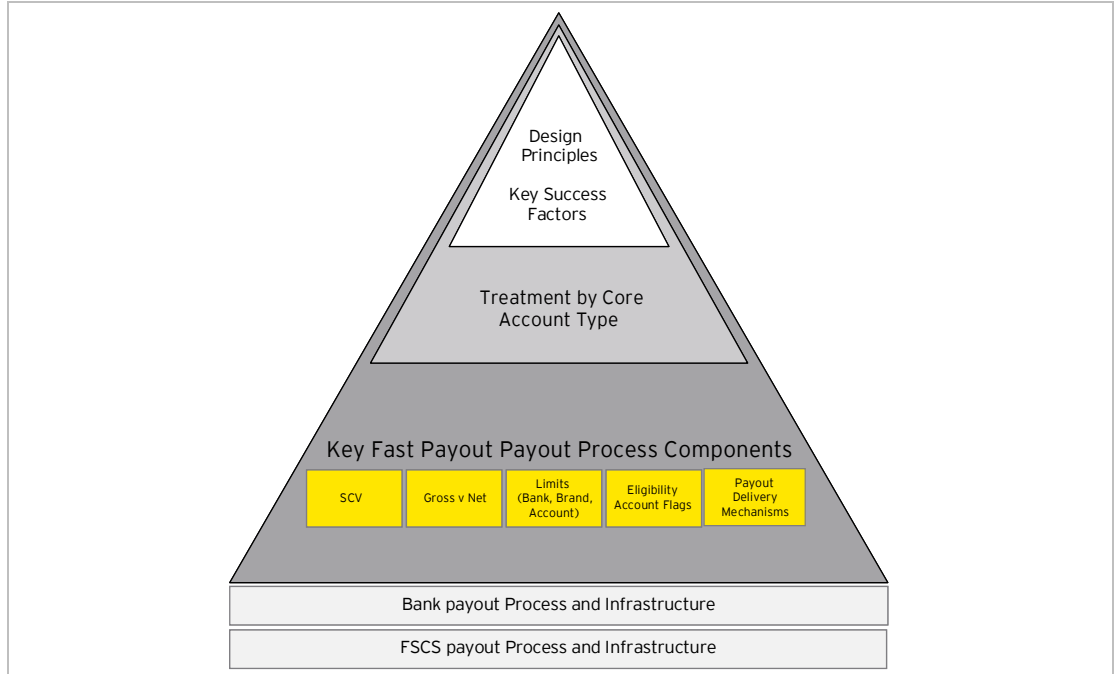


Ernst & Young has developed a fast payout solution framework (figure 2) to illustrate how the elements work together to form an overall solution.

Key elements of the Framework have been developed and successfully tested within previous payout contingency planning activities.

The Framework has been used as a guide for the cost benefit assessment and in shaping and challenging the solutions identified during the assessment phase. The sub-sections below provide further detail of the Framework and how these link to payout execution models and decisions regarding key components.

Figure 2: Ernst & Young Fast Payout solution framework



In summary the key elements of the Framework are:

- ▶ *Design Principles* – The principles towards which the fast payout solution should be developed towards e.g. target payout is 7 calendar days for all eligible depositors.
- ▶ *Key Success Factors* – The factors against which the success of the implementation of a fast payout solution can be measured e.g. the scheme helps to prevent market contagion and supports the reputation of the UK financial services industry.
- ▶ *Treatment Strategies* – The approaches used towards individual account types such that through both setup and execution of payout, the core design principles and key success factors are achieved.
- ▶ *Components* – The key features of the payout process necessary to improve the speed of compensation payout e.g. Account flags, SCV and Net v Gross.
- ▶ *Bank payout process and infrastructure* – The data structures and supporting technology necessary to allow fast payout through either the banks infrastructure or to allow data to be transferred to the FSCS for payout.
- ▶ *FSCS payout process and infrastructure* – The control of, and automated process for, checking and, as appropriate, the payout of compensation.

See 3.2.1 and 3.2.2 for design principles of setup and maintenance and execution of fast payout.

Key success factors used for the analysis of fast payout solutions within the study are as follows:

- ▶ *Payout process* - Payout is achieved in line with the conditions set in the design principles. These fast payout conditions considered operational risk, levels of inaccurate payments, fraud levels, customer detriment and volume achieved.
- ▶ *Customer impact* - The customer impact should be measured in line with design principles. A particular focus and level of care should be placed on the impact on vulnerable customers.
- ▶ *Market confidence* - In the event of bank failure, market confidence is likely to be affected. Success should be considered against the prevention of market contagion and maintenance of the reputation of the UK financial services industry in the international market.
- ▶ *FSCS and levy payers* - Throughout the fast payout implementation, the FSCS should operate a robust control framework supported by access to an audit trail and associated management information which confirms that payout was undertaken in line with scheme rules.

3.2 Cost and benefit analysis approach and method

This section provides an overview of the approach used for cost/benefit and impact assessment with the selected Study Banks.

The following key steps were undertaken to assess the relative costs and benefits of fast payout:

- ▶ To understand the costs to the banking industry we:
 - ▶ Worked with the FSA, BBA and FSCS, to identify the key areas where policy decisions were required
 - ▶ Identified the key cost categories required to allow Study Banks to submit responses capable of being compared and validated against each other
 - ▶ Reviewed the institution list, identified appropriate bank segments and Study Banks
 - ▶ Submitted data collation templates to Study Banks for population
 - ▶ Obtained Study Bank responses and challenged where appropriate
 - ▶ Extrapolated bank responses to calculate an industry-wide estimate across various policy options
- ▶ To understand the costs to the FSCS we:
 - ▶ Worked closely with the FSCS to establish current capabilities and also which, if any, systems would be necessary to update to achieve fast payout
 - ▶ Developed a cost template which was co -populated by Ernst & Young and the FSCS. This was based on scenarios with either the FSCS performing the payout calculation or the FSCS monitoring the payout calculation and the process being performed by the failing institution.

The cost/benefit analysis and impact assessment of fast payout for the selected Study Banks is based on the following components:

Analysis components	Description
<i>Cost and benefit of banking industry setup and maintenance for fast payout</i>	There are potentially significant setup costs to the banking industry for complying with any new requirements to support fast payout of FSCS compensation. The analysis reviewed how these costs vary depending on items such as the 'linking' of accounts (and related SCV) and decision points on Gross vs. Net payout. Benefits from this setup investment were also reviewed. Having implemented a fast payout solution, over a 12 to 24 month period, there will also be ongoing costs for the banks to maintain an appropriate state of readiness for fast payout.
<i>New FSCS infrastructure setup and maintenance costs for fast payout</i>	The FSCS will need to update its infrastructure and processes to support the needs of fast payout for the possible failure of a bank of any size (current capabilities are scaled towards supporting failure of smaller institutions over longer payout timescales). Although the role of FSCS on execution may vary from performing the payout calculation or monitoring the calculation performed by a failing bank, it is not felt that this would materially impact the FSCS solution requirements or cost. This is because the solution required to perform the payout calculation or to perform parallel testing of bank execution data, regardless of the payout execution model, is essentially the same.
<i>Costs, benefits, timescales and challenges of selected payout execution models</i>	In addition to the above setup and maintenance costs and benefits there has been a separate analysis of payout execution costs, benefits, timescales and anticipated challenges associated with any individual bank failure and subsequent decision to execute fast payout. We used a selection of agreed execution models (see section 6) to assess the impact of the various approaches and methods of payment, which may be used for fast compensation payout to eligible customers of a failed bank.

As well as considering all relevant UK depositors, Study Banks were asked to consider depositors in their bank's EEA passported branches, as customers in these branches are also entitled to compensation under the FSCS.

3.2.1 Analysis of fast payout set up and maintenance by banks

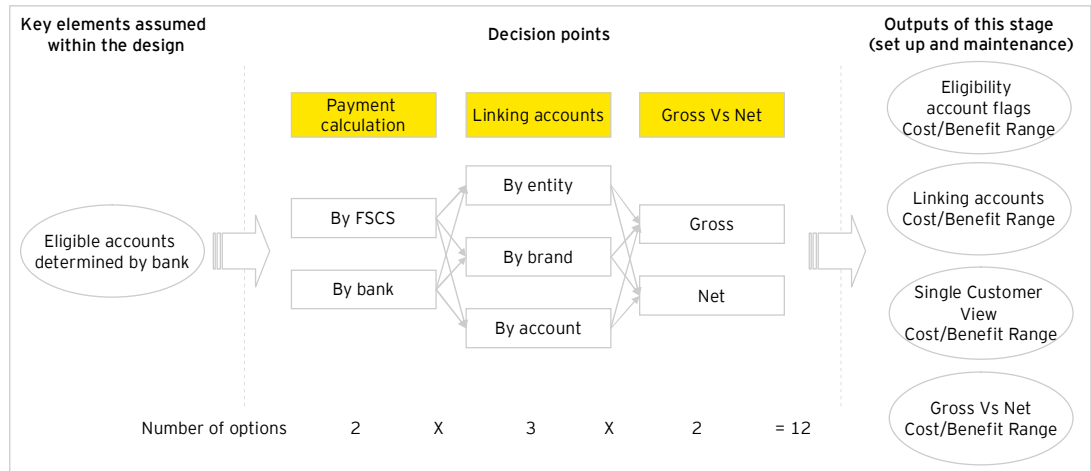
To implement any of the potential options for the scheme, there is likely to be a requirement for significant IT analysis, development, operational preparation work plus associated testing effort by the majority of retail deposit-taking institutions.

However, the extent and impact of this structural change is dependent on whether:

- ▶ Compensation entitlement calculations are to be made by FSCS or the bank.
- ▶ The FSCS provides compensation cover for individual accounts, for all accounts held within a Brand, or for all accounts held within an Authorised Entity.
- ▶ The FSCS provides compensation cover on a Gross or Net basis.

We determined that there were 12 primary options for fast payout setup and maintenance as outlined in the following diagram:

Figure 3: Option for Fast payout setup and maintenance



We have reviewed 11 viable options for fast payout with the Study Banks. Account Net was not considered to be a viable solution, as an Account based solution is implicitly on a gross basis as this would only contain deposit balances.

The following components will be needed to deliver fast payout:

- ▶ Account tagging for eligibility
- ▶ Linking accounts
- ▶ Developing a single customer view (SCV)
- ▶ Gross or Net payout

In undertaking the cost and benefit analysis for fast payout setup and maintenance, the Study Banks were asked to plan for solutions based on the following key design principles:

- ▶ All retail customers and small businesses as defined by current FSCS rules are eligible.
- ▶ The targets of the legislation are UK deposit-taking institutions which include banks, building societies and credit unions.
- ▶ All options for payout setup must assume that the bank proactively identifies via electronic 'eligibility flags' customers for payout.
- ▶ Target payout is 7 calendar days for all eligible accounts.
- ▶ Payment treatment should be based on a risk-based assessment of account type (e.g. transaction account (see definition in Appendix A), savings, ISA and fixed bonds) and status (e.g. active, dormant, 'gone away', and disputed), which may mean that there are some accounts for which payout is not expected to be within a 7 day timescale.
- ▶ Any short term FSCS funding will be provided by the Government (e.g. National Loans Fund) and is out of scope for this analysis.
- ▶ The banks and the FSCS will be required to complete their required transition to 'set-up readiness' for fast payout within a 12 to 24 month timescale.

- ▶ Banks shall be required to maintain accurate customer and account records on an ongoing basis such that they and the FSA/FSCS have confidence that the base data is accurate and compensation amounts can be calculated with 48 hours notice.
- ▶ As a planning and design assumption, Study Banks were asked to provide 99% data accuracy when designing a solution.

3.2.2 Analysis of fast payout execution models

Depending on the final policy decisions taken by the authorities and individual circumstances surrounding a particular bank failure (e.g. size of bank, account types, payout channels used, failure type, role of FSCS in payout process), there is a wide range of scenarios for how payout may be executed.

Given this context, and to make the analysis of payout execution manageable within the scope of this project, it was decided to review a selection of representative payout execution models with the selected Study Banks. The first two models are based on those put forward by the BBA working group and the others have been added based on Ernst & Young experience and discussions with the FSA, the FSCS and BBA with the aim of assessing a range of process and final payout options.

The outcome of reviewing these payout execution models with the Study Banks will inform both future policy decisions and the operational approaches which may be adopted for subsequent FSCS fast payout on bank failure.

In reviewing the projected timescales for payout execution, costs and benefits and associated challenges of the selected payout execution models, the Study Banks were asked to adhere to the following key execution design principles:

- ▶ Target payout is 7 calendar days for all eligible accounts.
- ▶ During execution existing bank service channels will generally only be operational as required to support the fast payout process.
- ▶ Payout can be phased to prioritise customer and product treatment considerations. Banks were asked to assume that payout of the appropriate compensation should be prioritised for transaction accounts.
- ▶ Payout execution plans must include all activities required from the time that notice is given (T-2) to the date of default (T) and the delivery of payments and access to funds within 7 calendar days (T+7). Consideration should also be given to post execution activities (beyond T+7) such as dealing with on-going customer queries
- ▶ Consideration should be made in the payout plans to deal with genuine hardship cases. The project group agreed that any detailed plans for government or social services support for these cases is outside of the cost benefit modelling scope.
- ▶ A rapid execution risk tolerance and control framework is required for fast payout solutions. FSCS will need to approve the payout approach and amount for any bank based payout.

3.3 Approach to wider benefits analysis

In each section on setup, maintenance and execution, a qualitative appraisal of the benefits case for each decision choice is documented. As appropriate, this contains information on the benefits of each choice to consumers, the banks and the FSCS.

In addition to this analysis, section 7 contains an end-to-end view of the benefit of moving from the current system to a fast payout system, in particular on the macroeconomic benefit.

In addition to commentary regarding the wider benefits of the fast payout system, section 7 contains analysis to estimate the benefit to the UK's overall economic position of moving to a fast payout environment.

3.3.1 Approach to estimating macroeconomic benefits

In section 7 we have included analysis which attempts to place a value on the impact on UK GDP from a policy change for faster compensation payout. This assumes that a primary objective of the banking reform policy change is to improve the speed of compensation payout, to restore consumer confidence in the UK banking system and speed up payout to eligible depositors. Our consideration of the eventual economic impact is based on the following steps:

1. Increased confidence in UK banking as a result of banking reform will mean either that depositors increase the amount of money they hold with UK deposit takers or the rate of decline of balances held with UK depositors is slower than under the current FSCS rules. Although fast payout represents only one element of the overall banking reform picture, this element is addressing the proportion of the increased savings in banks (or averted deposit withdrawals) which can be implied to be a direct result of the move to fast payout.
2. These additional funds held with UK deposit takers are then made available in the economy and a portion is channelled into increased investments. The increase in investment (or averted drop in investment) would translate into higher (or maintained) GDP levels.

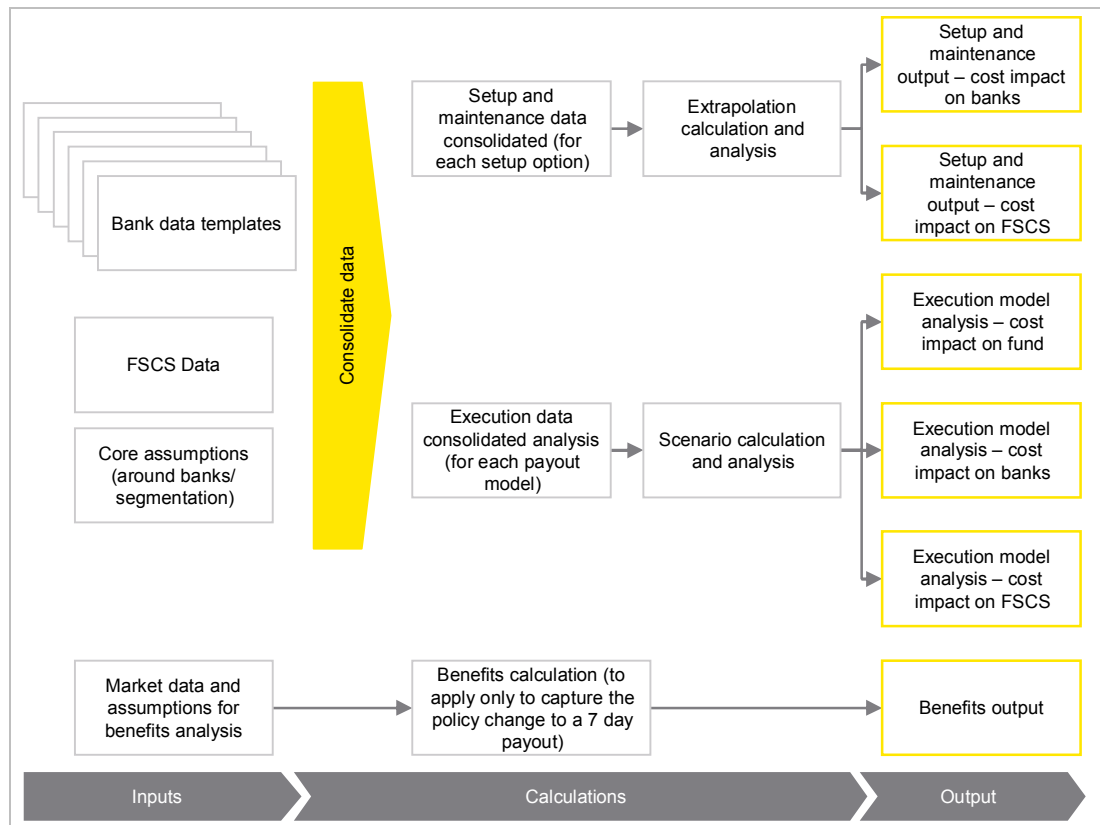
This analysis is over the same five year timeframe as the setup and maintenance analysis. Within that timeline, the scheme will operate for three and a half years starting in year two, and as such benefits are assumed to accrue starting in year two.

3.4 Overview of cost and benefit model structure

This section provides an overview of the key elements of the cost benefit model used to create estimates of the financial impact of a move to fast payout.

3.4.1 Components of the model

The financial model was created to act as a repository and calculation facility for information received from Study Banks, the FSA and the FSCS. It enables extrapolation of sample data to obtain an industry-wide view of the costs to setup and maintain a fast payout solution for banks; captures the costs to FSCS to setup and maintain a fast payout solution; and evaluates the fund payout costs and execution costs (for banks and FSCS), under a small number of scenarios. Figure 4 on the next page shows the overall structure of the model.

Figure 4: Model structure diagram for cost and benefit analysis

As can be seen in the diagram above, the model is broken down between inputs, calculations and outputs.

3.4.1.1 Financial model inputs

The model captures:

- ▶ *Bank data templates* – incorporating and maintaining detailed information provided by the selected Study Banks.
- ▶ *FSCS data* – including inputs from the FSCS for the required costs to implement and operate under a fast payout solution.
- ▶ *Core assumptions (around banks/segmentation)* – includes key background information on bank segmentation and the core extrapolation information.
- ▶ *Market data and assumptions for benefits analysis* – includes the core assumptions for the econometric analysis underpinning the macro benefits analysis.

3.4.1.2 Key model calculations

The model calculations section is broken down into three main areas, namely setup and maintenance, execution and the macro benefits associated with fast payout.

Setup and maintenance includes an extrapolation of the Study Banks cost to create an industry-wide cost.

Execution will be used only when payout is required. As such, costs associated with execution of fast payout are one-off costs. Therefore, the model creates execution cost analysis specific to a typical bank in each market segment with no extrapolation.

The macro benefits case is focused on a fast payout scheme compared against the current FSCS scheme. The analysis is based solely on the macro inputs, the output of which is shown in section 7.

3.4.1.3 Financial model outputs

Within the outputs section there are also the same three areas of focus, these being setup and maintenance, execution and the macro benefits case.

For setup and maintenance and execution, the model output provides analysis for the affected stakeholders. These are:

- ▶ *The banks* – to understand the costs under various options for both setup and maintenance and execution
- ▶ *FSCS as an organisation* – to understand the costs under various options for both setup and maintenance and execution
- ▶ *The FSCS fund* – to understand the likely cost of payout under various scenarios.

3.4.2 Setup and maintenance cost impact

The following sub-sections provide a description the methods used for bank segmentation and also the approach used for extrapolation in order to obtain an industry setup and maintenance cost estimation.

3.4.2.1 Banking segmentation

For the purposes of this paper, we have segmented the market on the basis of institution size. As information is not available on the number of eligible customers, we have used the size of protected FSCS deposits as a proxy for institution size.

This is shown in the table below:

Table 3: Bank segmentation

Bank segment	Size (Protected Deposits)	Number of banks (excluding those banks with zero protected deposit balances)
Large Banks	Greater than £25bn	7
Mid-Size Banks	Greater than £1bn and less than £25bn	23
Small Banks	Less than £1bn	128
Large Building Societies	Greater than £1bn	18
Small Building Societies	Less than £1bn	39
Credit Unions	Any size	284

The sample used within the study is taken from key banking segments (with the exception of Credit Unions and small building societies) so that it can be seen as representative. The focus of this study is the overall cost impact to the wider banking industry, so whilst data for Credit Unions has been included, we do not anticipate a material cost impact from Credit Unions. In total the Study Banks which provided data for this analysis held 41% of the total UK protected deposits.

3.4.2.2 Extrapolating Study Bank costs to obtain an industry setup and maintenance cost estimation

Within each segment, banks were assessed according to their size, the complexity of their organisation and their IT environment. These factors were converted into an estimation of cost to each bank outside of the study and then added together to obtain a cost for the

industry. The factors chosen are based on a number of factors documented within “The Constructive Systems Engineering Cost Model (COSYSMO): Quantifying the Costs of Systems Engineering Effort in Complex Systems” Barry W. Boehm, Donald J. Reifer, Ricardo Valerdi March 2002. These factors were converted into an estimation of cost to each bank outside of the study and then added together to obtain a cost for the industry.

A summary of the extrapolation process is as follows:

- ▶ Weightings (Low, Mid, High) were assigned to each bank across size, corporate complexity and IT complexity. The size was determined by the banks’ protected deposits, and corporate complexity and IT complexity were developed using Study Bank questionnaire results, and wider industry knowledge from Ernst & Young’s subject matter teams.
- ▶ A ratio between IT Complexity (60%), Corporate Complexity (20%) and Size of Protected Deposits (20%) was used together with allocated multiples for the industry sub-sectors based upon analysis of existing questionnaire data and our experience of the typical costs of large scale projects of this nature. These ratios are purely indicative and for the purposes of creating an industry estimate. It should be recognised that in reality that these ratios will be different for every organisation.
- ▶ Each individual bank multiplier was adjusted to capture the relative complexity of the Study Banks within their segment. Then the average of the Study Bank responses within each section was multiplied by the adjusted multiplier to obtain an estimated cost for each bank. These were added together to produce an industry cost.

In addition, Appendix C compares this extrapolation approach against a simpler extrapolation approach (multiplying study banks by the number of banks in each segment). This concludes that there is a difference between the values from each approach, but these are not material nor do they change any of the conclusions within this report.

3.4.2.3 Timeline for implementation

We asked banks to provide data and commentary for a fast payout solution within a 12, 18 and 24 month implementation timeline.

3.4.3 Execution cost impact and operational challenges

Study Banks were asked to provide information on the costs and their views on various payout execution models (see section 6).

The analysis assumes that any of the execution models may be used by the FSA and the FSCS as appropriate. We assume that banks may be asked to prepare for any potential model.

Specific views relating to execution are also included in Section 6. These include:

- ▶ The ability to meet the 7 day payout timescale
- ▶ The potential for fraud during payout
- ▶ Any additional challenges e.g. operational or customer related
- ▶ Potential additional benefits arising from having a fast payout solution.

4. Findings on setup and maintenance for fast payout

This section contains details of the findings relating to the initial setup and ongoing maintenance costs for transition to a fast payout environment. The findings are based on feedback received from the Study Banks and further analysis conducted by Ernst & Young. It contains cost estimates for the various policy options (e.g. Gross vs. Net payout), together with the associated benefits and challenges for key stakeholders.

4.1 Overview of approach used for setup and maintenance

It is anticipated that most banks will need to invest to modify IT applications and new operating procedures to undertake fast payout.

Key cost estimates were provided for bank setup and maintenance for fast payout which include:

- ▶ *Data Cleansing* – covers any additional IT and manual data cleansing which is undertaken (e.g. postcode and date of birth) to allow the unique identification of a customer for both sole and proportioned elements of joint accounts
- ▶ *Eligibility Account Flagging* – includes any additional IT and associated manual effort to electronically flag all eligible customers for FSCS compensation
- ▶ *Core Fast Payout Solution Build* – includes all hardware, application and system analysis, development and testing costs to create an SCV. It also includes the facility to check eligible account holdings against the FSCS limit checking based on holdings of eligible accounts to support payout processing
- ▶ *Additional Readiness costs for Fast Payout* – covers any additional costs such as contingency call centre capacity for query handling, internet application enhancements and staff training which may be required to support readiness for fast payout execution

In completing this cost analysis, Study Banks were asked to include within their estimates any additional costs for new controls, or changes which would be required to existing business as usual controls, to successfully implement the required solution.

4.2 Summary of findings on setup and maintenance

This section provides an overall summary of the findings for setup and maintenance.

The Study Banks felt that an 18 month implementation timeline would be required to undertake the changes required for fast payout solutions. Study Banks did not feel that there would be a material cost saving for a 24 month timeline: equally large banks in particular felt that the work required could not be executed efficiently within 12 months.

Although we received annual maintenance costs from the Study Banks, we multiplied these by 3.5 (representing the number of years, to provide a 5 year investment timescale). Together with the setup and the maintenance costs, this section compares the overall cost of each setup and maintenance choice over a 5 year period.

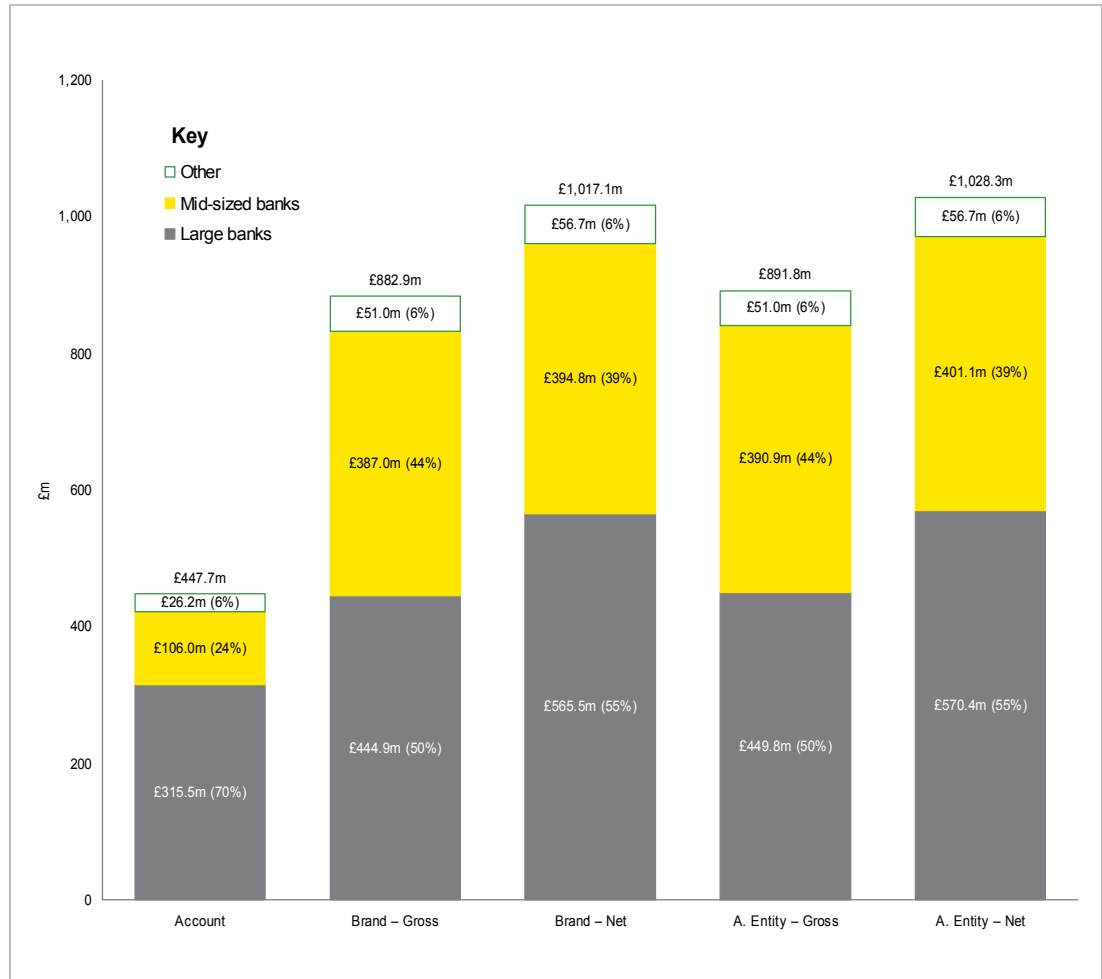
4.2.1 Overall setup and maintenance costs by segment

Chart 1, on the following page, illustrates a high level estimation for setup and maintenance cost (excluding any setup costs relating to the execution model choice). As two of the large banks stated that this scale of change is not possible to implement within a time period less than 18 months, these figures are based on a 5 year overall timeline, (with 18 months for implementation and 42 months for maintenance), this is consistent with the view expressed

by a number of the larger Study Banks, that they may require 18 months to implement fast payout.

The costs in the chart below assume the full setup and maintenance requirement by banks. However, if the policy remained that compensation payout was only via the FSCS, these setup and maintenance costs may be reduced (as detailed in section 4.9). The impact of this could be of the order of £60m - £150m.

Chart 1: Estimated industry setup and maintenance cost by bank segment



From the information provided by the Study Banks, we have estimated a total industry cost estimate ranging from £0.4bn for an account based solution, to £1.0bn for an Authorised Entity based solution.

An account based solution, at lower initial setup and maintenance cost, still requires significant development for many banks to cleanse and extract data from source systems and develop the functionality to operate the application of FSCS limits.

The main differences between the total costs shown in the chart above are in Gross vs. Net and the basis of account aggregation (account, Brand or Authorised Entity). Differences relate to the cost of the SCV solution developed for each option, and the required integration into existing source systems.

From the data provided by the Study Banks, the total industry setup and maintenance costs for the Brand Gross option are approximately equal to the total industry setup and maintenance costs for the Authorised Entity Gross system. The total industry setup and maintenance cost for the Brand Net system is approximately equal to the total industry setup

and maintenance costs for the Authorised Entity Net system. This implies that in the choice to have an SCV, the setup costs relating to the Brand/Authorised Entity option are not as sensitive as the Gross vs. Net option.

Based on the sample data provided, the chart highlights that the large bank segment holds the greatest proportion of total industry setup and maintenance costs. Although there are only 7 banks in the segment, they represent between 50% and 70% of the total industry setup and maintenance costs.

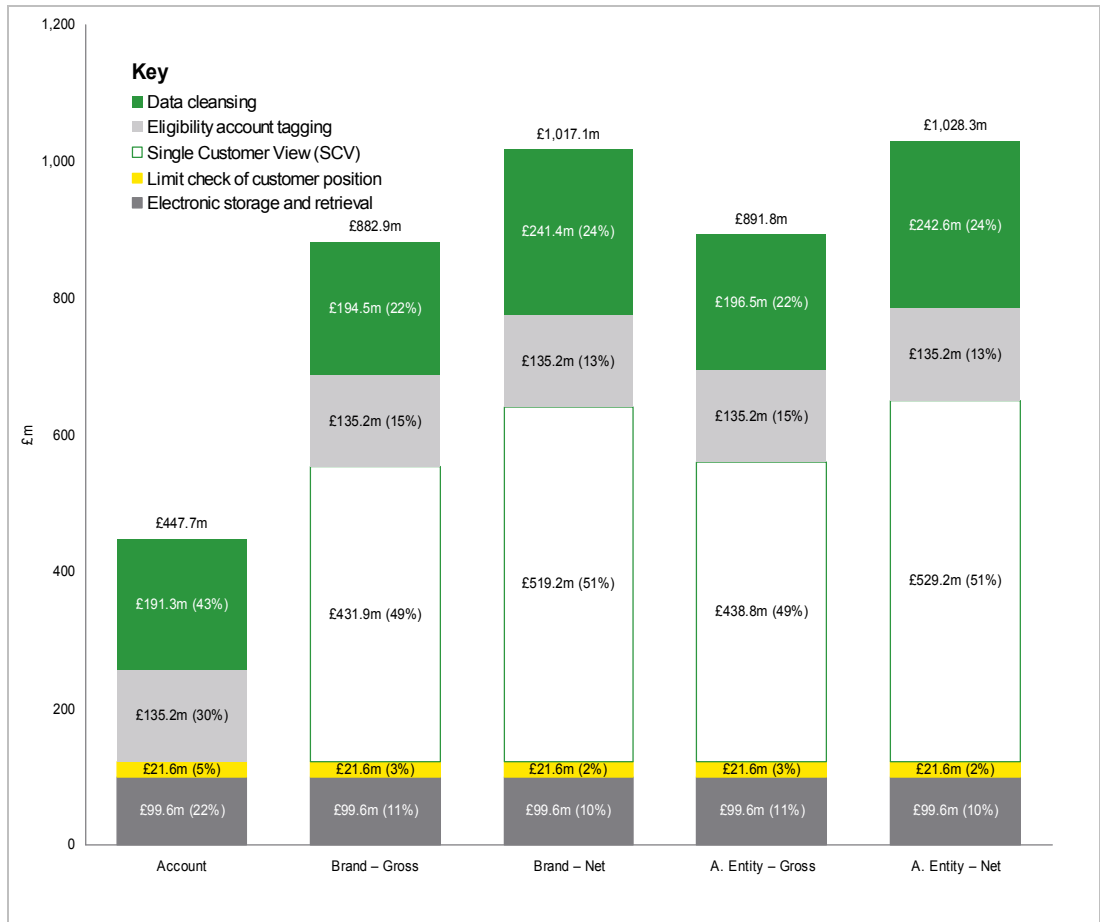
This is followed by the mid-sized bank segment which has between 24% and 44% (depending on aggregation and calculation basis), of the total industry setup and maintenance cost.

The lowest total cost is for the segment which contains small building societies. This segment comprises 39 institutions which are predominantly small institutions and have few systems to integrate.

4.2.2 Component setup and maintenance costs

Chart 2 below highlights the total industry cost for setup and maintenance (excluding the additional readiness costs which are execution model dependent), across all banking segments and broken down by cost category.

Chart 2: Estimated industry setup and maintenance by cost category



4.2.2.1 Summary of findings for single customer view (SCV)

The results clearly demonstrate that any solution requiring an SCV is more expensive to implement than an account based solution. The core cost of the SCV is between £432m and £530m.

The SCV data received from Study Banks is in line with our hypothesis that a Net SCV would be more costly than a Gross SCV (as a result of integration of the mortgage and debt systems). The difference in the industry setup and maintenance cost between a Brand Gross and a Brand Net SCV is £87m and difference in the industry setup and maintenance cost between an Authorised Entity Gross and an Authorised Entity Net SCV is £90m.

The costs for implementing the SCV are highest for large and medium banks, where eligible accounts are dispersed across multiple product areas and banking channels. The challenge appears more pronounced in Authorised Entity rather than Brand SCV solutions as the SCV is selected from multiple systems.

4.2.2.2 Summary of findings for data cleansing

Data cleansing is difficult because all customers must be matched on a consistent basis. It needs to be possible to identify eligible sole traders and match them to their other retail accounts.

Study Banks have commented on the high cost of data cleansing, particularly for small businesses, which would require a new and bespoke data analysis process.

The data received highlights that bank's data cleansing requirements vary significantly. For example, one large Study Bank already has in place a data warehouse which ensures that their data is relatively clean. In this case they would have little or limited cost for data cleansing. However, another large Study Bank has a high number of systems which contained inconsistent customer data. This would mean their data cleansing cost would be as high as £16m - £20m for setup and a £4m annual maintenance cost.

The chart above illustrates data cleansing may be an issue even for an account based solution. It also illustrates that there would be minimal difference in cost between an Authorised Entity and a Brand based solution.

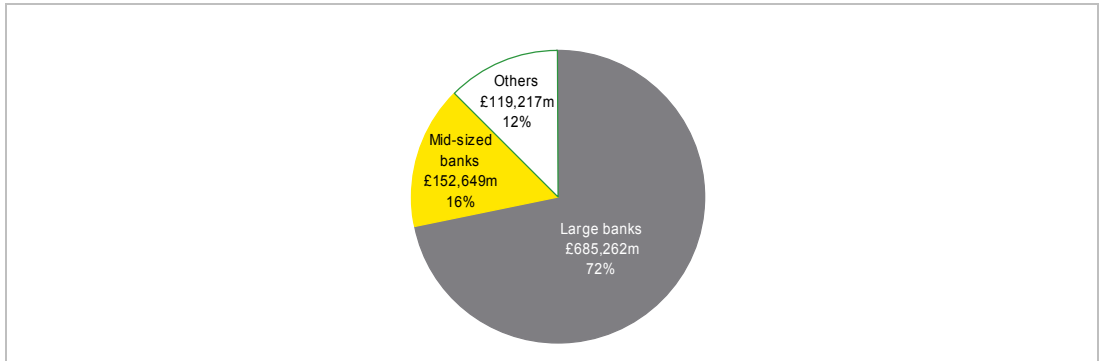
4.2.2.3 Summary of eligibility account flagging

Eligibility account flagging would cost around £135m. This is consistent across aggregation and calculation bases. The main challenge relates to maintaining current data on the performance of small businesses for FSCS purposes.

4.2.3 Summary of findings on setup and maintenance for the large and mid-size bank segments

This section contains key points from Study Bank responses and the analysis conducted by Ernst & Young.

Chart 3: Total protected deposits by bank segment



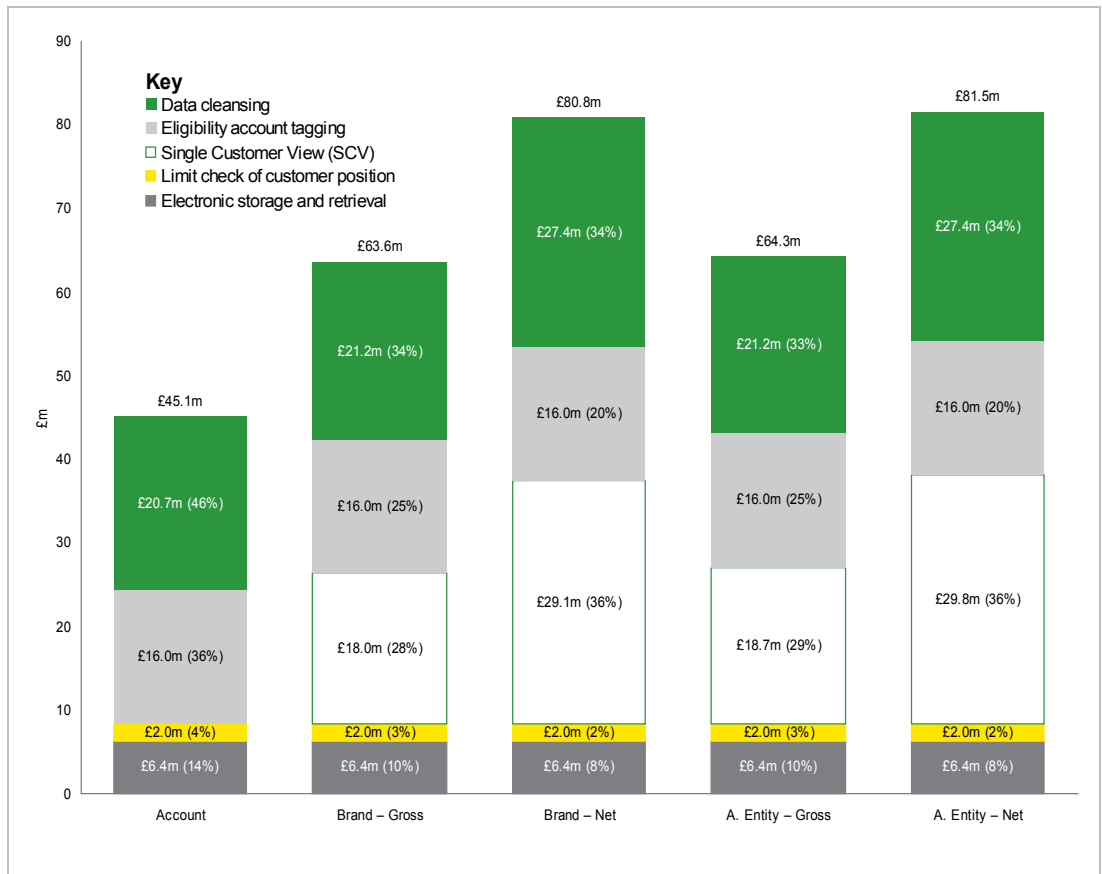
Source: FSA – FSCS Bank submissions (December 2007)

As shown in the chart, large and mid-sized banks represent 88% of the total protected deposits. This section focuses on the industry impact of setup and maintenance and particularly the impact on the large and mid-size banks.

4.2.3.1 Large Banks

Chart 4 shows the average large bank setup and maintenance by cost category, which explains the cost impact upon a typical large bank. There are a total of 7 banks in the large bank sector. Therefore, the costs in this section are one-seventh of the total large bank setup and maintenance cost.

Chart 4: Average Large Bank setup and maintenance by cost category



The chart highlights that respondents in the large bank segment felt that there was a significant data cleansing cost, which is thought to be mainly as a result of integration of large

complex legacy systems created through mergers and acquisitions. This ranges from £20.7m to £27.4m, with higher costs for compensation on a Net rather than Gross basis.

It was felt that SCV costs were substantial, particularly for Net systems where costs are on average £11m higher for a Net SCV system than for a Gross SCV system. This is due to the impact of integrating mortgage and loan systems into the FSCS calculation.

There are similar setup costs under either the Authorised Entity or Brand compensation basis (Gross or Net).

4.2.3.2 Mid-Sized Bank

Chart 5 shows the average mid-sized bank setup and maintenance cost by cost category, which explains the cost impact upon a typical bank in the segment. There are a total of 23 banks in the mid-sized bank sector. Therefore, the costs in this section are one twenty-third of the total mid-sized bank setup and maintenance cost.

Chart 5: Average Mid-Sized Bank setup and maintenance by cost category



Mid-sized banks expect that much of their work would be developing an SCV (c 70% of cost). This is a result of an SCV task which has a similar level of complexity, but not scale as the SCV task for a large bank. However, in the mid-size bank segment, the cost for other cost categories of setup and maintenance (such as electronic storage and retrieval), is much lower than for a large bank. As a result, mid-sized banks feel that the data cleansing and account tagging require less effort than their larger counterparts.

4.3 Data Cleansing

To achieve a single customer view, and to help ensure that payments are delivered correctly, many deposit takers will need to conduct a data cleansing exercise. This may include improving the consistency of fields such as the address/postcode, date of birth and/or gender/title, across a range of systems.

To understand the full entitlement of an individual customer there will be a need to correctly identify all the accounts held by the customer both individual accounts and joint accounts with other parties.

For joint accounts, significant effort may be required to obtain additional information on the second (and subsequent) account holders. This is particularly important as joint account holders have separate FSCS compensation entitlements. For the purposes of compensation payout, it is assumed that each party in a joint holding or liability has an equal share.

Where an individual customer holds a sole trader business account, the account balance would be amalgamated with the individual’s account to calculate compensation due. A partnership would be treated as a separate entity from the individual partners, and a limited company would also be considered a separate entity.

Data cleansing needs to be undertaken as necessary, and maintained, such that it enables accurate calculation or representation of a single view of each customer's holdings (deposits) and liabilities (loans, mortgages etc) for Net payout (which is the basis of payout under FSCS rules).

The extent of manual effort required in the initial data cleanse is largely dependent on the level of data quality which currently exists. A potential area of complexity is the recording of personal identification of the owners of eligible small business accounts. This will be necessary to ensure that the SCV reflects an individual's personal and business accounts which are eligible for FSCS compensation.

4.3.1 Findings on impacts for banks

Ability to deliver fast payout is accurately acknowledged by the Study Banks to rest partly on the underlying quality of their customer static data on customers. Information provided by the Study Banks highlights that although data cleansing costs vary significantly across individual banks, depending on the number of data sources; overall they represent a significant cost component (22% to 43%) of the total industry setup and maintenance costs.

In summary, the key challenges in meeting the desired standard of 99% data accuracy include:

- ▶ The current lack of a standard common unique individual customer identifier within the UK banking industry (such as the US style Social Security Number) complicates the accurate matching of relevant accounts held by an individual eligible customer.
- ▶ In general, large banks and those which have grown through acquisition, resulting in the need to integrate a larger range of customer data sources, have significant costs for data cleansing.
- ▶ Integrating and matching relevant sole trader and small business accounts with relevant retail accounts is seen as particularly challenging and costly. This is partly due to various ways banks segment and manage their business customers, which do not always match with the thresholds (e.g. Turnover of less than £6.5m, less than 50 employees), contained in the current FSCS/FSA rules.
- ▶ There are also significant costs in maintaining the relevant static data on eligible customers for the current FSCS exceptions (e.g. Close relatives of bank directors and managers) and, for the reasons outlined above, sole traders and small businesses.

4.3.2 Views on benefits to customers

There could be a number of benefits to customers from improving the quality of static data held within the banks, many of which are also linked to the SCV. Examples of these benefits to customers, which have not been quantified or discussed in detail with Study Banks in this review, may include:

- ▶ Greater consistency of key details such as changes to address, status or other related items across the systems used within a particular bank would improve service levels and correspondence accuracy.
- ▶ Improved static data accuracy may also help reduce errors in bank records such as where a customer is wrongly identified in a particular product system as being 'dormant' or 'gone away' but correctly categorised in other systems.
- ▶ Specifically, in relation to fast payout, eligible customers are likely to receive faster and more accurate FSCS compensation payments if the bank has accurate static data.

4.3.3 Views on benefits to the FSCS

Accurate customer records and associated static data are an essential foundation to allow the FSCS to oversee accurate and timely payment of compensation. In this regard, the FSCS will be dependent on the bank's records. If the FSCS is faced with poor quality data it will need to ask customers to complete claim forms which would, inevitably, compromise the objective of 7 day fast payout.

4.4 Analysis of Eligibility Account Flagging

In order to meet the target timeframe for fast payout in of 7 calendar days, it will be necessary to have pre-established electronic flagging in place for accounts which are eligible for FSCS compensation. Banks may choose, depending on their current IT systems and data structures, to meet this requirement by flagging non-eligible accounts.

Accurate electronic identification of eligible accounts is particularly important to reduce errors in the fast payout process. For any significant scale of payout a fast execution process could not involve individual claim forms being submitted by individual customers. The automatic assignment of rights, which allows FSCS to payout without individual consumer claims, is consistent with proposals in the Banking Bill.

Even where a customer is identified as eligible, there will be situations, such as when an account is in dispute, when the FSCS compensation payout should not occur until issues surrounding that customer or account are resolved.

It was generally assumed that data extraction algorithms are capable of using combinations of existing flags (e.g. dormant, dispute) to quickly filter FSCS eligibility and core retail accounts for fast payout. This however is complicated by what are considered to be relatively complex eligibility rules in terms of those individuals and accounts that should be excluded from FSCS compensation.

4.4.1 Findings on impact for banks

The Study Banks and FSCS teams agree, and this is particularly so for large banks, that electronic eligibility flags on accounts would be achievable and necessary for most forms of fast payout execution. Flagging of accounts is generally seen as cost-effective at between 13% to 15% of the setup cost for most forms of aggregation.

In summary, the key challenges to undertake accurate electronic flagging of eligible accounts are:

- ▶ The cost of IT solutions and associated manual effort required to correctly identify and maintain eligibility flags for eligible sole traders and small business customers.
- ▶ Flagging and maintaining accurate records of eligibility exceptions within the core retail accounts (e.g. Accounts of close relatives of Directors and Managers employed by the bank).
- ▶ Correctly dealing with the complexities of trustee accounts and those with power of attorney.

4.4.2 Views on benefits to the FSCS

Electronic account flagging is viewed as essential to achieve a 7 day payout for any medium or large sized institution.

Assuming that banks correctly electronically flagged eligible accounts, this is likely to reduce the error rate associated with any large-scale payout.

4.5 Analysis of core solution build and single customer view

In order to comply with the requirements for fast payout, it is envisaged that banks will be required to build additional IT solutions and supporting processes that link into their existing (Business as usual) BAU operations.

We have sought to obtain estimates for individual elements (as opposed to one estimate for the overall solution build), since part of the reason for this exercise is to establish views on which components provide the most cost-effective contributions to fast payout. In addition, it also helps to identify where it is most cost or risk-effective for the failed organisation to perform parts of the payout process, and when it may be more effective for the FSCS to operate parts of the fast payout processes.

IT solution build costs include the core development activity and relevant solution component unit and integration testing.

The key elements of cost within the fast payout IT solution build are:

- a. Development of a SCV across all relevant account holdings
- b. Limit checking of customer position against the FSCS limit (currently £50,000)
- c. Electronic storage and retrieval capabilities of aggregate eligible FSCS payout obligations and supporting information to allow, if required, fast payout via any of the execution models.

It is envisaged that an SCV IT solution will be required for all options of aggregation (i.e. by Brand, Authorised Entity), except (the application of the FSCS limit by Account. Study Banks were however asked to consider any additional costs such as data extraction that may be required for limit checking on aggregation on an Account basis without an SCV in place.

Our analysis shows that banks would find the complexity and associated costs of creating an SCV and undertaking the required FSCS limit checking, to be significantly more under the Net rather than the Gross payout option.

4.5.1 Development of a Single Customer View (SCV) Solution

It is recognised that unless core systems have been developed to hold an SCV and processes have been operated to maintain this, there will inevitably have to be some human intervention where a computer program can at best identify a probable or possible match for two or more records.

With very large organisations, it is highly unlikely to be cost-effective to reach 100% accuracy, even with manual efforts. The objectives of fast payout should be borne in mind when considering the effort required. Fast payout needs to pay most people accurately within 7 calendar days. Failure to identify two customer records as belonging to the same person, may mean overpayment. But the effort to reduce this risk to zero may well exceed the costs of such overpayments. As such, as a planning and design assumption, we stipulated that organisations should aim for 99% accuracy when designing the solution.

Providing an SCV across Brands will be better supported if data formats and structures are consistent. In the situation where FSCS systems are part of the processing chain, common data formats will be required (for details of data requirements, please refer to Appendix B). Whether organisations choose to utilise standard formats within their own systems, or develop data reformatting routines as part of a data extract utility, was a decision that each Study Bank took.

The end result of this process is that a bank should have the ability to generate, with 48 hours notice, the balances and related details across each eligible customer's accounts. Study Banks have considered the specific data requirements they would need to create an SCV but

as a minimum, the solution must include the data requirements as defined by the FSCS to establish a consistent and complete SCV for fast payout (See Appendix B).

4.5.2 FSCS limit check of customer position

The system needs to be able to identify which eligible account type holdings are above FSCS limits (currently £50,000) and which are below the limit. Although the limit is currently £50,000, this may be changed at any time, and therefore the system needs to have the capability to adapt for a change in the limit. Final payout obligations will be capped as appropriate to the limit in preparation for final payment of the due compensation. There is an implied assumption that, having obtained the relevant account data, limit checking would primarily be an end of day automated process.

4.5.3 Electronic storage and retrieval of eligible FSCS payout obligations

Having identified all relevant account holdings for eligible customers and applied the limit, storage and retrieval is required to affect FSCS payout. This should be developed such that it can be used for the following purposes:

- a. As a data repository for customer facing staff and solutions to access such that information including total deposits per eligible customer and related FSCS projected payout (post limit calculation) can be viewed.
- b. To provide a view to the bank and as requested to the FSCS and FSA of the total deposits per eligible customer and of the total FSCS projected payout for that firm at that point in time.
- c. To provide an audit trail and management information of actual payouts against eligible payouts.

4.5.4 Findings on impact for banks

The core systems development and associated components around the SCV represent the largest cost element for fast payout setup.

Key cost considerations for banks of the various options are:

- ▶ The overall industry cost of the SCV component is estimated to vary between £432m and £530m depending on the type of aggregation used.
- ▶ Primarily, as a result of the need for many banks to integrate data from separate systems holding mortgage and other lending details from those which support deposits, the cost of a Net based SCV is higher than for a Gross solution. The estimated additional cost for a Net rather than Gross SCV are around £135m.
- ▶ Having created the required SCV, the limit checking of customer holdings against the prevailing FSCS limit was not seen as difficult or costly element of the solution (c 2%-5% of costs).
- ▶ From the data provided and subsequent discussions with the Study Banks, the costs for electronic storage and retrieval of the calculated FSCS obligation is dependent on whether this is a standalone solution (current assumption) or whether this information is accessible across existing banking channels and visible to staff and customers.
- ▶ The SCV solution evaluated within the study was based on the principle that, for both ongoing testing and any future execution, this would compromise a batch type automated process. It should be noted that many of the Study Banks stated that the costs for setup and maintenance for a real-time solution would be significantly more. The

increased cost of integrating the FSCS data into existing channels for large banks could be as high as £30m per bank.

Observations on key challenges to set up the required SCV for FSCS purposes, limit checking and electronic storage of the FSCS obligations by eligible customer were:

- ▶ The scale of the challenge in creating an accurate SCV of FSCS obligation is generally directly proportional to the number of individual IT source systems and existing warehouses, which need to be accessed. Other drivers include the cost of resourcing and contractual arrangements for developing the fast payout related solution and modifying any source systems.
- ▶ Some banks, and in particular the larger ones, will face significant cost and data challenges where they need to consider customer cross-holdings in multiple currencies and across EEA passported branches.
- ▶ The FSCS SCV requirements are a subset of what would be necessary for a bank to gain significant business benefits from an SCV investment.
- ▶ In general, the smaller banks and building societies have few systems and some already have a central consistent view of most of the data required for a fast payout SCV.

4.5.5 Views on benefits to customers

There may be significant additional benefits to customers of banks developing an FSCS style SCV beyond the contribution to fast payout should the bank fail. Examples of these benefits to customers, which have not been quantified or discussed in great detail with Study Banks in this review may include:

- ▶ Potential for the banks to be able to provide customers with a periodic view of their aggregate deposit holdings and position relative to FSCS limits across all their relevant accounts. This in turn could help customers to make better informed investment decisions and avoid some unintended risk taking.
- ▶ Banks may use the aggregate FSCS SCV data to assist customers to manage their portfolio of products and accounts more effectively.

4.5.6 Views on benefits to the FSCS

Access to the FSCS-style SCV data on a customer by customer basis for a given bank is fundamental to gain an accurate picture of the individual and collective compensation position. Having this information readily available would provide the following benefits to the FSCS and the authorities:

- ▶ Improved confidence in decision making and a better audit trail in failing bank intervention (e.g. SRR options).
- ▶ Better industry and bank specific deposit compensation obligation data would support improved decision making regarding the size of the FSCS fund and associated levy requirements.

4.6 Analysis by Account, Brand and Authorised Entity

A policy decision needs to be made as to whether the scheme provides compensation cover by account, for all accounts held within a Brand, or for all accounts held within an Authorised Entity.

This has an impact on the fund payout, which is likely to be highest from an account based compensation scheme (see section 5). However, from a setup and maintenance perspective, this decision has a significant cost impact on the banking industry.

4.6.1 Finding on impact for Banks

The variation in cost to banks for the setup and maintenance are shown in the table 4 below:

Table 4: Industry setup and maintenance costs by aggregation and calculation basis

Aggregation basis	Setup cost (undiscounted)	Annual maintenance cost (undiscounted)	Total setup (18 months) and maintenance cost (42 months) – undiscounted
Account	£278.9m	£48.2m	£447.7m
Brand – Gross	£577.8m	£87.2m	£882.9m
Brand – Net	£710.0m	£87.7m	£1,017.1m
Authorised Entity – Gross	£586.7m	£87.2m	£891.8m
Authorised Entity – Net	£721.2m	£87.7m	£1,028.3m

The account based view is significantly less costly than either a Brand or Authorised Entity view. This is because an account calculation does not require a detailed SCV or an in-depth data cleansing exercise. These represent the majority of the costs of setup and maintenance for implementing and operating a system capable of achieving FSCS payout within 7 days under other options.

Different views were expressed by Study Banks on the impact of a Brand or an Authorised Entity system. Some banks felt that a Brand system was significantly easier and cheaper for them to deliver, and others felt that an Authorised Entity system could be the cheaper option. This is due to legacy systems each bank currently has in place and the effort required in both using and developing these systems to meet fast payout requirements. Therefore, the overall cost of a Brand and an Authorised Entity system can be seen as being not significantly different (c. £10m).

There are execution options relating to whether the banks or the FSCS perform the payout calculation. If the FSCS performs the payout calculation, they will need to create a single payout database capable of importing a data feed from a failed bank. This is required under any payout calculation basis. Therefore, it is not thought that there are any additional costs for Account, Brand or Authorised Entity based calculations for FSCS.

4.6.2 Views on benefits to customers

The major benefits to customers are the same as those described in the SCV section earlier.

The additional benefit on payout (e.g. pace of payment, likelihood of size of payout) is captured in table 5 in section 5.

4.6.3 Views on impacts and benefits to the FSCS

As discussed earlier, it is not thought from a cost perspective, that the decision of an account, Brand or Authorised Entity based calculation has a material operational cost impact to the FSCS.

The main benefit to the FSCS of a change in the system is around the ability to communicate and improve consumer awareness on the scheme. The Authorised Entity system is difficult for some customers to understand as they do not always know what banks form an Authorised Entity. It is expected that, in particular, an account based system would be easy to build consumer awareness. It would, however, have significant cost implications on the size of the fund payout in the event of bank failure (see section 5).

4.7 Analysis of Gross vs. Net

The table shown in section 4.6 shows the respective costs of a Gross and a Net system. As highlighted in the table, a Net system is likely to cost more for the banks to implement than Gross, with a total industry setup and maintenance cost of c £135m,

As shown in section 4.2.2, the main difference between Gross and Net costs, is due to the data cleansing and SCV cost categories which are both significantly more expensive for Net payout systems. Under a Brand system, the data cleansing and SCV have total industry setup and maintenance costs of £47m and £87m higher under a Net system. Under an Authorised Entity system, the data cleansing and SCV have total industry setup and maintenance costs of £46m and £90m higher than under a Net system.

This is because a Net system requires banks to integrate their mortgage and loan systems as well as their deposit systems into the payout calculation. This additional system integration is very challenging and further complicated as the deposit based systems are usually able to run real time, whilst the loan and mortgage based systems are often batch operated.

As described in section 4.6, the optionality relating to setup and maintenance is whether the banks or the FSCS perform the payout calculation. If the FSCS perform the payout calculation, they will need to create a single payout database which is capable of importing a data feed from a failing bank. This would be required under any payout calculation basis. Similar to section 4.6, it is not thought that there is any additional cost for Gross or Net calculations for FSCS.

4.7.1 Findings on impact for banks

The discussion of the costs that the banks would incur around systems development and associated costs of Net system over a Gross system is shown above. Clearly a Net system is both costly and challenging for banks, particularly in data cleansing and SCV. The benefits to banks of these are shown in sections 4.3 and 4.5 respectively.

Study Banks were generally in favour of a move to a Gross based solution on the grounds of both cost and fairness to customers. They did however have a strong view that current account overdrafts should be included in Gross calculations.

4.7.2 Views on benefits to customers

Net payout for a bank with a significant loans or mortgage portfolio is likely to cause significant hardship for the customers, who would be denied access to their liquid funds due to longer term debt obligations.

Other major benefits are the same as those described in the SCV section earlier, see section 4.5.

The additional benefit on payout (e.g. pace of payment, likelihood of size of payout) is captured in the table 6 in section 5.

4.7.3 Views on impact and benefits to the FSCS

As discussed earlier, there is no major cost difference to the FSCS of a Gross or Net system.

The main impact on the FSCS of a change in the system is the significant cost implications on the size of the fund payout should a bank fail. It is expected that a Gross payout would initially be significantly higher than a Net system, see section 5 for further detail.

4.8 Additional readiness costs setup and maintenance

We anticipate there may be additional costs, other than the key IT development and data cleanse related setup and maintenance costs outlined above, which may be material for banks to achieve readiness for fast payout.

For example it should be anticipated that during any fast payout execution, additional strain will be placed on customer communication channels. These may include additional queries to call centres, internet banking (people checking their accounts), and mail handling.

We have, therefore sought to understand the costs of obtaining any additional capability which could be functional with 48 hours notice to handle 6 weeks of sustained activity consisting of volumes of customer queries at twice the normal peak hourly load of customer queries. These costs should essentially be for any additional standby capability (e.g. additional short notice call centre expansion) or changes that would be required to support fast payout going beyond current BAU capabilities and capacity. These are separate from the information provided on the execution costs for the selected payout execution models.

There may also be material additional readiness costs for fast payout in areas such as solution testing and verification, staff training, communication and stationery which should be factored into the overall setup and maintenance costs.

For the purposes of this exercise Study Banks have provided costs for the additional readiness activities outlined below for each of the fast payout execution models. Unless otherwise indicated we have assumed that these costs would not vary significantly with the various setup options for aggregation (e.g. Authorised Entity, Brand, Account) or payout on a Gross or Net basis.

4.8.1 Findings on impact for banks

There may be significant additional setup and maintenance costs in areas such as staff training and standby call centre capacity associated with the transition to a fast payout environment. In general, this is likely to be proportional to the size of the bank and the number of eligible depositors it has and is considered less sensitive to variation in value of the protected deposits.

Study Banks were unable to provide detailed costs for these additional elements until further definition is given on their operational obligations within fast payout execution. This is particularly the case in execution models where the failing bank is responsible for the end-to-end process (Models 1 – 3 as described in Section 6). Some Study Banks also considered that they would need more information on how fast payout would work within SRR, to for example estimate what reliance could be placed on the availability of existing staff..

Given as outlined above these costs can not be accurately defined at this stage of the overall policy development and that they are, to some extent dependent on the execution models they do not form part of the current setup and maintenance cost modelling.

4.8.2 Views on benefits to customers

If the failing banks are to be responsible for major elements of the fast payout execution rather than this being the sole responsibility of the FSCS, then customers will expect the bank to service their queries.

Greater bank staff awareness of the FSCS rules is, in general, considered to be a benefit to customers regardless of whether or not the bank is in immediate danger of failure. It is generally accepted that if bank staff could, in a timely manner, provide customers with aggregate balances against FSCS limits, that this would be of benefit to some customers and would contribute more generally to customer confidence.

4.8.3 Views on impacts and benefits to FSCS

The general view taken is that if banks can accurately answer customer queries about the FSCS and compensation, this would be beneficial. As a general rule the greater the role banks have in the process of execution of fast payout, the higher the obligation becomes for capacity and capability (people, knowledge and systems) to support customers during payout.

4.9 FSCS setup and maintenance

The FSCS role could vary between capturing all of the data from banks necessary to perform the payout calculation to providing a role of assuring the accuracy of bank-prepared calculations.

Based on the information provided by the Study Banks, if the banks provided data to FSCS to perform the calculation, we would expect a reduction in the industry SCV setup and maintenance costs across both Brand and Authorised Entity solutions of between 10% and 25% from c. £40m to c. £130m. This is because there is still a requirement for elements of the SCV development within banks, specifically the data extraction from legacy systems and the transformation of this information to common data formats for transmission to FSCS. In addition the industry limit checking setup and maintenance costs would not be required resulting in a further saving of c. £20m. Therefore, the total industry setup and maintenance costs saving could be in the order of between £60m and £150m.

However, from an FSCS viewpoint, the technological solution required to capture data from the banks is not substantially different from the infrastructure required to enable a parallel testing environment for checking the accuracy of bank data and processes. Therefore, it is not expected that the calculation or data collection role would have a significantly different cost base to the assurance role.

The current FSCS technological solution could be adapted relatively cost efficiently to have the capability necessary to operate a fast payout scheme calculation. The resulting technological costs are estimated to be c. £620,000, depending on the detail required under their various policy options. As the current compensation process would not cope with a fast payout scenario, there are also significant process changes required. In addition, management oversight would be required both for the technological and process change elements. We estimate that the costs of process change and management oversight will be less than £400,000, which means the total FSCS cost is approximately £1m.

These costs may vary for a number of reasons, e.g. the level of matching and limit checking which is performed by FSCS, account treatment choices made and whether FSCS needs to develop processes to manage prioritisation of payout to current accounts or ISA balances.

4.10 Benefits related to fast payout setup and maintenance

It was proposed to the Study Banks that there were potentially a number of ancillary benefits which could be delivered as a result of implementing fast payout setup and maintenance. These may fall within the following categories:

- ▶ *Cleansed data* – Clean data may improve the quality of management information and speed customer management procedures
- ▶ *Selling and marketing products* – More information about customers may allow firms/banks to target sales and marketing more effectively
- ▶ *Differential pricing* – The ability to price products differently based on additional knowledge about customers
- ▶ *Managing risk* – A proposed solution may allow a bank to better understand customer risk profiles which could improve the bank's commercial and operational decision making
- ▶ *Meeting regulatory requirements* – Any fast payout solution will give banks the opportunity to have the data to improve knowledge of their customer base. This may for example help improve the bank's ability to meet the KYC regulatory requirements efficiently
- ▶ *Understanding the value of your customers* – By understanding the bank's customers and their holdings of deposit based products, the banks may be able to improve the value that their customer base provides to their organisation
- ▶ *Reduced complaints* – Data cleansing may reduce complaints, as correspondence will be more accurate
- ▶ *Increased efficiency* – Duplication of effort will be reduced, as multiple systems will be updated

A number of Study Banks agreed that there may be some additional business benefits which could be leveraged from the fast payout investment, but stated this would be difficult to quantify. Some had strong views that given the limited data set required for an FSCS-based SCV, it would provide very few, if any, of the direct additional benefits outlined above.

A number of the Study Banks have developed a form of SCV to support marketing initiatives. However, the coverage of accounts and quality of data required for FSCS calculation and payout is much higher than has often been specified or developed for marketing purposes. For most of these Banks, considerable further effort would be required, to deliver significant BAU business benefits from the fast payout SCV investment.

5. Cost impact on the FSCS fund to execute payout

This section contains details of the findings relating to the FSCS fund in the event of payout execution under the various options of setup and maintenance.

5.1 FSCS fund impact

We requested data from the Study Banks on customer account balances held up to a range of limits for each of the fast payout setup and maintenance options. This is necessary in order to understand the impact of various fast payout options on the projected FSCS fund payout.

The banks were able to provide general information on their account balances, which is appropriate for the account based fund payout calculation. However, most Study Bank respondents found that the limitations in their existing systems meant that they were unable to provide accurate data for all customer accounts on an aggregated Gross or Net basis. This was a particular issue with the Net basis, where there was an additional challenge for Study Banks to understand a 'point-in-time' view of loan and mortgage balances. This meant that the data received from Study Banks was not provided on a consistent basis. The quantitative analysis contained within this section is, as a result, limited to account based information, where there is confidence over the data received from each bank.

This section contains two tables. The first table contains the FSCS costs and arguments for the choices of aggregation bases (account, Brand and Authorised Entity). The second table contains the costs and discussions on the choice between Gross and Net payout calculations.

Table 5: FSCS fund impact, advantages and disadvantages by aggregation basis

Account linkage basis	Expected FSCS Payout Cost rank	Advantages	Disadvantages
Account - Each customer has a limit per account held	High	<ul style="list-style-type: none"> ▶ Simple and easy to operate and understand. 	<ul style="list-style-type: none"> ▶ Customers with high balances could manage their risk simply by opening up a larger number of accounts with the same institution (potentially increasing fund exposure by 30% to 50%, see explanation below this table for further detail)
Brand – The customer has a FSCS limit applied to the total value of their holdings by Brand	Medium	<ul style="list-style-type: none"> ▶ Some Study Banks have stated a preference for a Brand based solution. ▶ Potentially easier for customers to understand their FSCS position under a Brand payout basis rather than an Authorised Entity basis 	<ul style="list-style-type: none"> ▶ Difficulty determining Brand and legal identification of what forms a Brand
Authorised Entity – The customer has a FSCS limit applied to the total value of their holdings by Authorised Entity (current position)	Low	<ul style="list-style-type: none"> ▶ Authorised Entity is much simpler to define and understand from a legal perspective ▶ Payout under the Authorised Entity basis will have the lowest cost to the FSCS fund 	<ul style="list-style-type: none"> ▶ Potentially customers would need to understand their bank's corporate hierarchy to understand their compensation position

If a limit is applied by account, it is expected that customers may seek to manage their balances below the limits by opening multiple accounts with the same provider. Of the Study Bank respondents, we noted that banks had between 30% and 50% of their balances held in accounts with deposits greater than the FSCS limit of £50,000. Assuming, over a period of time, all customers managed their balances in this way, we would therefore expect that on account basis the fund payout would be 30% and 50% higher in the event of default.

Table 6: FSCS fund impact, advantages and disadvantages by calculation basis

Calculation basis	Expected FSCS initial Payout Cost rank	Advantages	Disadvantages
Gross	High	<ul style="list-style-type: none"> ▶ Gross payout is likely to be quicker. ▶ Potentially Gross payout is fairer to customers, as some view their credit holdings as a short term holding, and their loan and mortgage balances as two separate debt pools. ▶ The Gross basis could avoid significant customer hardship as customers will continue to have access to liquid savings. 	<ul style="list-style-type: none"> ▶ Gross payout has the highest initial cost to the FSCS fund.
Net	Low	<ul style="list-style-type: none"> ▶ Net payout has the lowest initial cost to the FSCS fund 	<ul style="list-style-type: none"> ▶ Customers may have their short-term deposits offset against loans and mortgages which could cause financial hardship and reduce consumer confidence.

The difference in size between a Gross and a Net payout is dependent on each institution's customer base. In particular, the drivers of this difference are the number of depositors who also hold a loan account or mortgage with the bank and the average size of the loan or mortgage balance.

6. Findings on fast payout execution models

This section contains details of the findings relating to fast payout execution and is based on a combination of feedback interviews from the Study Banks and further analysis by Ernst & Young.

Without further details regarding the policy and operational rules for fast payout, the Study Banks were unable to provide accurate estimates for execution costs beyond business as usual resources.

Given the significance of costs for setup and maintenance and fund payout considerations, we do not consider detailed one-off execution costs to be a key factor in the fast payout cost/benefit analysis.

6.1 Overview of approach used for payout execution analysis

For the purpose of the study the BBA, the FSA, the FSCS and Ernst & Young agreed the following list of fast payout execution models for evaluation:

- ▶ Model 1 – ATM enabled
- ▶ Model 2 – Account balance transfer
- ▶ Model 3 – Bank based cheque
- ▶ Model 4 – FSCS based execution

These execution models should not be viewed as the only options that could be used in the event of a bank failure and if FSCS payment is required. They are considered to be relevant for this study as they allow analysis to be undertaken of the various combinations of approaches.

The following process flow diagrams provide details of the four payout execution models. For each model there are a number of key phases of the process:

- ▶ Eligibility and entitlement calculation
- ▶ Entitlement advice
- ▶ Access to monies
- ▶ Final payout delivery

For all execution models, the FSA and the FSCS will require appropriate assurance that customer data and compensation payout amounts are accurate. In addition to the planned ongoing testing obligations for banks, this is likely to involve on-site presence during any payout execution to ensure that all relevant controls and reconciliations are taking place.

In our analysis and interaction with the Study Banks, we have discussed the following issues which are based on the agreed key success factors:

- ▶ Limited customer hardship and managed access to liquid funds
- ▶ Accurate and timely customer payout or access to funds within 7 days
- ▶ Limited contagion risk to other banks
- ▶ Fast payout is completed with an acceptable fraud profile

6.2 Summary of findings on execution models by bank segment

This section contains key points from Study Bank feedback and Ernst and Young's analysis of fast payout execution for each industry segment.

In summary, given the range of diversity of scale and complexity of firms across the industry, our view is that a variety of different payout execution models will be required depending on the type of institution which is failing and the circumstances in which this is occurring.

Our analysis, and feedback from the Study Banks, supported the view that risk mitigation was a key factor in defining appropriate models for fast payout execution. We would, therefore, recommend that as policy decisions progress, and the responsibilities within the accepted models for payout execution become clear, a further detailed risk assessment is undertaken of any chosen fast payout model.

6.2.1 Large Banks

Study Bank feedback and wider research (Ernst & Young experience plus FDIC and FSCS discussions) supports concerns given the scale, their significant role in the banking system and the large number of current account customers they hold, that should intervention be required, it is most likely to be via a form of SRR that would not immediately involve a move to fast payout. However, the capability for fast payout and to produce the associated FSCS calculation may still be necessary.

Once in SRR (under a form of operational contingency plan if not completed over a weekend) and assuming other options are not considered appropriate, orderly payout could then be managed by providing separately access to or transfer of current accounts and payout of other savings products. Due to the scale, and the likely need for customer interaction to complete payout, this process may fall outside the 7 day target.

Key execution risks to be managed: Contagion, law & order, genuine customer hardship, financial crime.

6.2.2 Mid-Sized Banks/Smaller banks/Building Societies

Respondents in the mid-sized and smaller bank segment again saw challenges in achieving the 7 day target but felt that bank based cheques (Model 3) or FSCS based execution (Model 4) were favourable. In summary this is because the production and processing of cheque based payout is a relatively simple and controllable payout method for smaller institutions. However, it is anticipated that the majority of customers would get their compensation within 7 to 10 days.

For the limited number of institutions in this category with a significant volume of current accounts, consideration should be given (as outlined above for larger banks), to providing either access to or transfer of these current accounts to an alternative provider.

Key execution risks to be managed: Fraud, error and genuine customer hardship.

6.2.3 Credit Unions

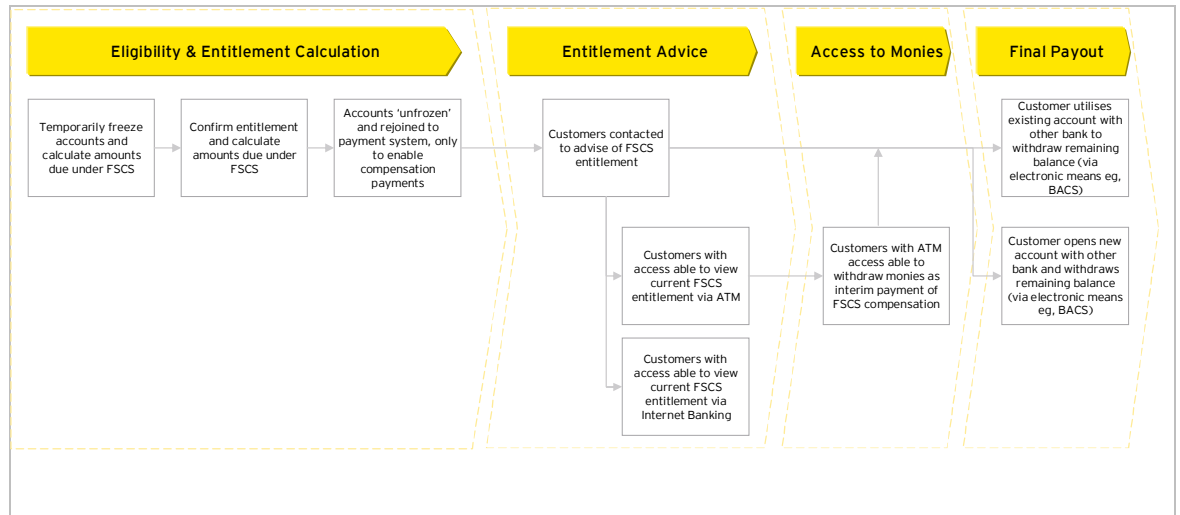
Credit Unions have not been part of the Study Banks, but from discussions with the FSCS it would seem appropriate that they are dealt with in a similar way to the current process which broadly meets the criteria. Where good quality customer records have been maintained by credit unions, experience from previous FSCS payouts in this segment would indicate that the current process for paying out through the FSCS would meet the key success factors and allow the majority of customers to be paid in 7 – 10 days.

Key execution risks to be managed: Delays due to poor quality of existing credit union data.

6.3 Model 1 – ATM enabled

This model has been adopted from previous work undertaken by the BBA working group and is focused around providing initial access to FSCS compensation via the ATM Network.

Figure 5: Model 1 – ATM enabled



6.3.1 Relative merits of ATM enabled model

The key relative merits of this model compared to the others are:

- ▶ It could provide immediate access but only to the subset of customers with ATM cards
- ▶ ATMs at failing bank could be used while physical branch is closed.

6.3.2 Key challenges to ATM enabled model

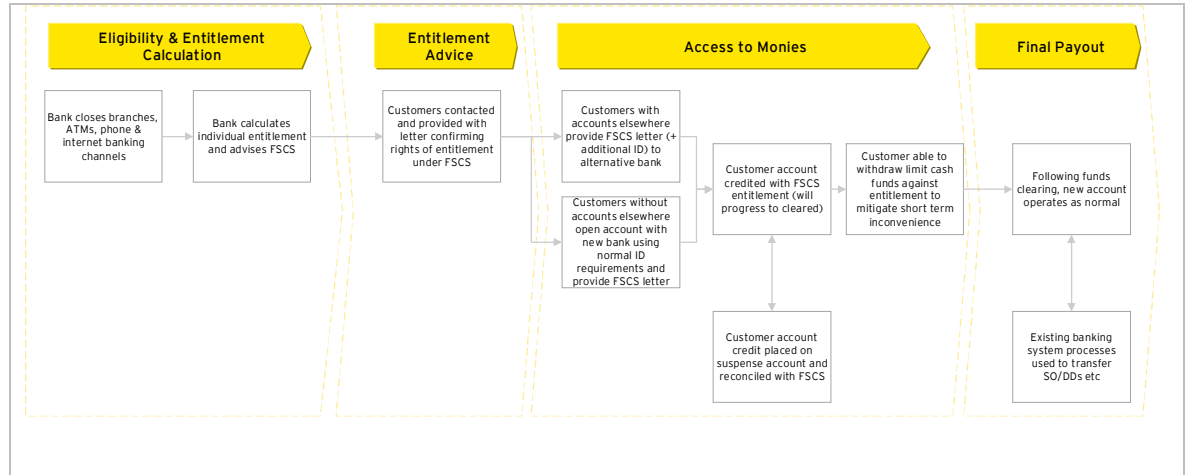
The relative disadvantages of this model compared to the models are:

- ▶ Operation within ATM limits restricts payout amounts and raising limits creates risk
- ▶ Physical cash availability in ATM channels would limit total payout
- ▶ Contagion across the wider banking industry ATMs
- ▶ Potential public order concerns and crime at ATMs
- ▶ High cost of providing a view of FSCS entitlement to ATMs.

6.4 Model 2 – Account balance transfer

This model is again adopted from previous work undertaken by the BBA working group and is focused around the rapid transfer of accounts to an alternative provider to allow the FSCS compensation payment.

Figure 6: Model 2 – Account balance transfer



6.4.1 Relative merits of account balance transfer model

The relative advantages of this approach compared to the other models are:

- ▶ Fastest approach to providing alternative account and access assuming accounts can be opened quickly (see alternative solutions in section 6.7)
- ▶ Considered a more secure method than many others and less open to fraud.

6.4.2 Key challenges to account balance transfer model

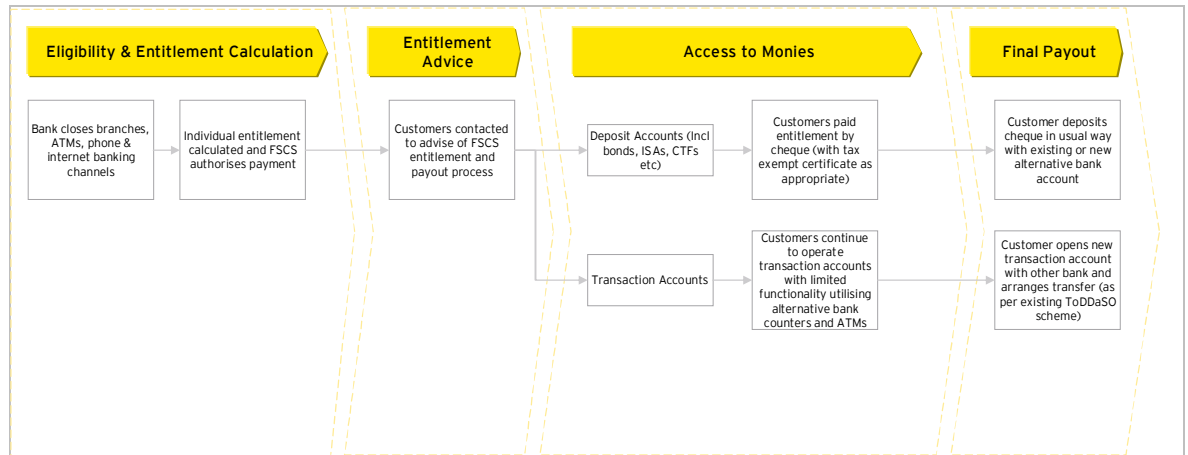
The disadvantages of this model compared to the other models include:

- ▶ Know Your Customer (KYC) requirements and other account opening issues would impact speed of transfer
- ▶ Contagion to other banks, with queues of failed bank customers in their branches to open new accounts
- ▶ New account at alternative bank may have limited or reduced features.

6.5 Model 3 – Bank based cheque

This model is based on using the failing bank's infrastructure to payout by cheque, all deposit based accounts, whilst continuing limited facilities on Transaction Accounts until they are transferred to an alternative provider.

Figure 7: Model 3 – Bank based cheque



6.5.1 Relative merits of bank based cheque model

The relative advantages of this model compared to the others are:

- ▶ Relatively simple to develop and execute particularly for smaller institutions
- ▶ No major impact on other channels or other banks
- ▶ Has split treatment between current accounts and deposits giving continuity of service
- ▶ Can provide for letter and cheque together (tear off) giving ISA tax details.

6.5.2 Key challenges to bank based cheque model

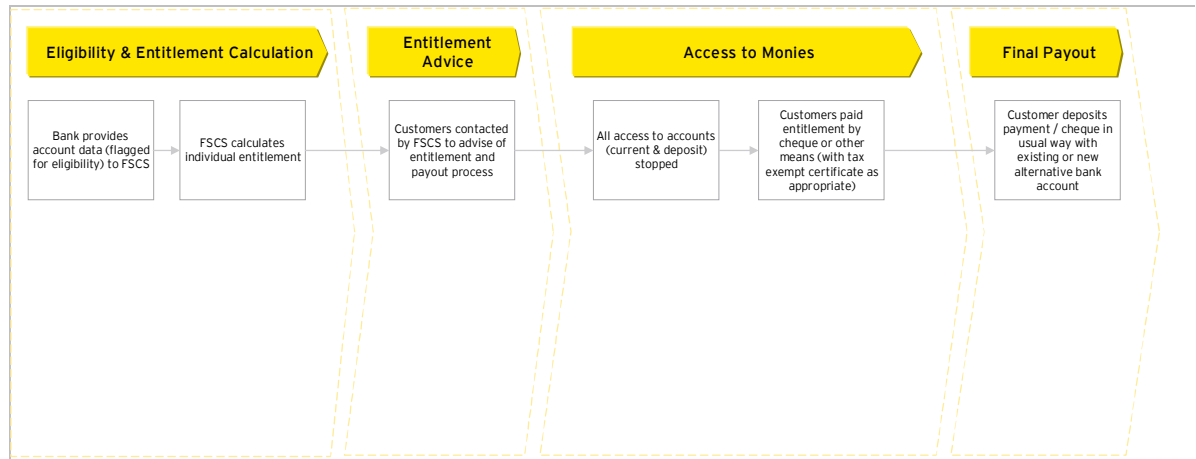
The key disadvantages compared to the other models are considered to be:

- ▶ Logistics of high volume cheque distribution and cashing will be an issue for larger banks
- ▶ Failed bank brand on cheque may cause acceptance issues at new bank
- ▶ Cheque usage less common and not appropriate in all countries. Cheque payment infrastructure likely to deteriorate over time
- ▶ Fraud and theft risk is significant in distribution and cashing.

6.6 Model 4 – FSCS based execution

This alternative model uses eligibility flagged account data from the failing banks with final payout of compensation through the FSCS infrastructure.

Figure 8: Model 4 – FSCS based execution



6.6.1 Relative merits of FSCS based execution model

The relative advantages of this model compared to the others include:

- ▶ Single central cost for cheque standby and production
- ▶ Central control and related management information on final payout
- ▶ Should reduce costs of fast payout development by banks that can use this compared to other models (but common data feeds and formats will be required)
- ▶ Increased capacity of FSCS infrastructure for entitlement calculation can be used as a parallel test for bank based solution
- ▶ Base stock of FSCS cheques more efficiently managed and accepted.

6.6.2 Key challenges to FSCS based execution model

The key disadvantages of this model compared to the others include:

- ▶ It is unlikely to be able to support full fast payout in 7 days for very large banks
- ▶ Reliance on failed banks data quality
- ▶ Logistics of high volume cheque distribution and cashing
- ▶ Cheque usage less common and not appropriate in all countries.

6.7 Alternative solutions which may be taken forward

In our analysis and interaction with the Study Banks, we have identified a number of potential opportunities to improve payout execution models. Further work is required to progress the related policy and analysis necessary to implement any of these ideas.

6.7.1 Use of pre-setup Second Accounts with alternative provider for transfer

The key operational challenge to account balance transfer (Model 2) as a method of payout is the time taken to open a high volume of new accounts with other institutions when a bank fails. In addition to extending the payout timescales, this is likely to cause contagion issues within the other banks with queues in branches.

To minimize these risks, it may be beneficial to review how customers could have pre-setup second accounts with alternative providers. This could be achieved in several ways including:

- ▶ *Customer based approach* – Customers are encouraged to provide alternative contingency second account details to their primary provider with a mandate to transfer relevant FSCS compensation in the event of failure of the primary bank. To mitigate the cost of maintaining the contingency account, the alternative bank would need to see some potential benefits and have access to market its products to these customers.
- ▶ *Bank to bank based approach* – It may be possible to arrange reciprocal arrangements between banks to provide contingency second accounts. The advantage of this would be that no customer interaction would be required. However, this may be difficult to facilitate.

Given the high available bandwidth of the payments network (other than at Easter and Christmas peaks) and the introduction of faster payments, these options are seen as very favourable to assist the fast payout of compensation. There are, however, challenges with this approach including the accurate maintenance of second account records and the costs of servicing these accounts which in normal circumstances may not be actively used.

6.7.2 Provision of a high volume cheque production capability

As fast payout is hopefully a rare event, consideration has been given to the most cost-effective way of providing a standby high volume cheque capability.

This would involve appointing a high volume provider to the FSCS either directly for its own purpose or to allow a bank which is failing directly to access the standby facility when performing the final payout. In this way it is envisaged that provision of a facility capable of printing a potentially very high volume of cheques and letters could quickly be provided in a cost-efficient manner.

It should be noted that whilst this facility would fully support cheque based fast payout execution models (Models 3 & 4); it could also be used to support other scenarios where high volumes of printed material are quickly required.

6.7.3 Running down using open channels in the failed bank

Given the challenges which fast payout presents for larger banks, it has been suggested by some Study Banks that the best approach may be to run down a failed bank using existing channels. This type of model has been used in other countries, most notably in the US by the FDIC, but generally only for smaller banks.

This is likely to require less investment by the banks in upfront setup and maintenance than fast payout but creates significant challenges including:

- ▶ Experience in recent banking failure events in the UK and in the US would indicate that with all normal channels open, the failing bank would experience a major run despite compensation schemes being in place
- ▶ For any sizeable bank such an event and subsequent run is likely to have significant contagion and public order risks
- ▶ Systems, procedures and controls at banks would still require significant enhancements to be made in order to manage payout within the FSCS rules and limits
- ▶ It is considered likely that some disadvantaged and / or vulnerable customer's could suffer particular hardship in the rush for withdrawals through branch and internet channels.

6.8 Account treatment strategies and prioritisation

In order to meet the overall objectives around speed of payout, accuracy and fairness to customers, different account treatment strategies and prioritisation may be required.

We outline below a summary of account treatment and payout prioritisation considerations based on both Study Bank feedback and Ernst & Young's analysis. It should be noted that additional policy and guidance may need to be provided to the banks and the FSCS to optimise fast payout execution.

6.8.1 Separate payout approach for current accounts

Study Banks have confirmed our initial views that current accounts require a payout treatment strategy around restricted 'draw-down' and transfer. In general, it was felt that many customers would suffer significant hardship and loss of access to everyday cash unless some continuity of service is maintained. In bank failure this is assumed to be undertaken within a protected SRR environment.

Some customers will suffer loss of benefit on packaged accounts with forced transfer if, for example, linked insurance cover is not maintained.

The key challenges to enforce the separate treatment of current accounts were considered to be:

- ▶ Operation with other accounts to adhere to overall FSCS limits
- ▶ Savings and passbook accounts used as current accounts (e.g. ATM or SO/DD)
- ▶ Providing 'draw-down' access restrictions
- ▶ Maintaining appropriate restricted access to payments networks

6.8.2 Deposit and Savings accounts

Once the transition to a fast payout environment has been completed, most Study Banks considered that basic savings and deposits can be easily aggregated and paid out quickly via many payout delivery mechanisms.

The key challenges and complications with these products that require further guidance were considered to be:

- ▶ Challenge to correctly handle loss of interest on notice periods
- ▶ Applying appropriate rules for breaking fixed rate or term bonds

- ▶ Dealing with interest calculations where they are linked to stocks or currencies

6.8.3 Treatment of tax exempt accounts (ISAs)

In discussing the treatment for tax exempt products, it was generally felt that some consumers would demand the maintenance of tax advantages rather than seek a pure cash alternative. Fast payout could therefore be achieved by either electronic transfer or by cheque with entitlement letter approved by HMRC for setup by an alternative provider.

The key challenges in undertaking the transfer are considered to be:

- ▶ Some customers may want immediate access to funds from ISAs
- ▶ Systems challenges in collating historical tax usage data on letters to allow the correct tax treatment and allowances
- ▶ Prioritisation of the ISA if the aggregate customer deposits are over the FSCS limit

In addition, current ISA rules would not allow ongoing payment into new accounts.

6.8.4 Applying limits and prioritising fast payout

As noted above, for those customers who have an aggregate position over the FSCS limit (currently £50,000), it may be appropriate to apply a prioritisation to how the cap is applied.

Having discussed the prioritisation of accounts with some Study Banks, it was considered appropriate to prioritise, but rules and guidance would be required. For example, the approach for a multiple account holder who is over the aggregate limit could be to:

- ▶ Provide 'draw down' access to the current account assuming this has small positive balance
- ▶ Transfer of full ISA value, maintaining full tax advantage (assuming aggregate total is less than £50,000)
- ▶ Cap remaining savings if required to the overall £50,000 limit and complete payout

In considering the key challenges to prioritised payout the following issues were raised:

- ▶ Policy is required on whether rules are made or customers are given choice. Customer choice is likely to introduce delays in payout
- ▶ The FSCS limit calculation and application becomes more complex if prioritisation is required

6.8.5 Treatment of in flight transactions

In reviewing the fast payout execution models and timescales for customers to receive their compensation, there has been a general concern raised about the treatment of In-flight transactions. As noted above, we believe it may be necessary to separate the payout approach for current accounts which should, if accepted as a policy, mitigate the issue of awaiting clearing for most In-flight transactions.

Further policy guidance is required to avoid delaying payout to any customer until post settlement of all In-flight transactions has occurred within the bank, as this would significantly compromise the 7 day target payout. The alternatives which require further consideration include:

- ▶ Allowing for a second wave of payout for those eligible accounts or customers with identifiable in flight transactions, such that final payment could be made after this delay. This would, however disadvantage customers with In-flight transactions and assumes the bank can easily identify those customers with In-flight transactions on their accounts.
- ▶ Providing interim initial payments (e.g. £500-£1,000 per account) to all eligible customers immediately and following up with a final settlement payment once all transactions have been settled. This has advantages in terms of speed of access to some funds but complicates the payout execution process and could lead to potential over payment once all transactions have settled.

6.9 Execution of fast payout for EEA branches of failing banks

There are additional challenges which occur for many banks in planning for the execution of fast payout for their EEA branches. These include the following considerations:

- ▶ EEA branches often use different systems and operate in different legal and market environments which dictate the choice of fast payout.
- ▶ It would be necessary to access appropriate foreign currency (e.g. Euro) provision for the failing bank or FSCS payment.
- ▶ Clarity of the roles of the respective countries compensation scheme (see below).

6.10 Fast payout for FSCS ‘topped up’ banks

The FSCS has a number of non-UK banks which currently ‘top up’ to the higher limit of the FSCS scheme in the UK, and belong to their home nation compensation scheme. In these circumstances, the initial base compensation, in the case of failure, should come from the home nation with only the ‘top up’ coming as appropriate from the FSCS, for those customers with aggregate holdings above the home state limit.

This provides considerable complication and challenges to the accurate and timely execution of fast payout. Fast payout in these circumstances is likely to require further consideration in the following areas:

- ▶ Consideration of whether the FSCS should, as a matter of policy rather than exception, provide the full compensation to UK depositors (of up to £50,000) under a fast payout model and claim back appropriate funds from the home scheme.
- ▶ Policy would also be required to establish who would be responsible for funding costs and currency risks if the FSCS takes the full payout role.
- ▶ Possible cross-border consultation amongst the regulators and the relevant authorities for fast payout principles to apply in other countries.

7. Wider benefits of moving from the current model to fast payout

This section contains information on the benefits of moving from the current model to a fast payout model.

It contains some explanation of the wider benefits of the fast payout model to retail consumers, banks and FSCS and FSA, irrespective of the particular fast payout basis choices. This highlights that implementing a fast payout system brings significant benefits both when the system is used for a failing bank, but also through the component parts of an operational fast payout solution irrespective of the success of each bank.

Although the benefits contained within this section could be significant, they are also difficult to quantify by comparison to a high setup and maintenance cost. Therefore, at the end of this section, we have also included a macroeconomic analysis, providing a scenario of the total benefit to UK GDP of fast payout. This complements the qualitative views in section 7.1. The analysis uses an economic argument to attempt to place a value of these benefits in respect of growth to the UK economy.

7.1 Benefits to key stakeholders of fast payout

The wider benefits of a move to fast payout can be seen through the three main stakeholder groups of the policy change. These are:

- ▶ Consumers – by improving their confidence in UK banking
- ▶ Banks – by improving their customer data
- ▶ FSCS and the FSA – by allowing them to have access to more detailed information from the banks

7.1.1 Benefits to consumers

There are a number of benefits to consumers of a fast payout solution, irrespective of the fast payout policy choice selections. These include:

- ▶ The confidence that, in the event of bank default and up to the FSCS limits, consumers will not have to wait for any significant length of time before having access to their compensation monies. It is thought that providing consumers with access to their money quicker would:
 - ▶ Minimise consumer hardship faced as a result of a bank failure
 - ▶ Reduce the possibility of contagion as consumers will see that payment is efficient and accurate.
 - ▶ Maintain public order
- ▶ Their bank being in a position to provide wider quality communication and customer service either through having cleaner and more accurate data or as a result of the bank understanding its customers' total financial position (if an SCV is a required part of the fast payout solution). If the bank chooses to communicate these positions to its customers, those consumers are could make better informed investment decisions and avoid unintended risk taking.

7.1.2 Benefits to banks

There are a number of benefits to banks of a fast payout solution, irrespective of the fast payout policy choice selections. These include:

- ▶ The most important benefit to banks for the fast payout scheme is that, if consumers have confidence that compensation payout is both accurate and timely, they are less likely to withdraw their funds from a failing bank. By withdrawing deposits from a failing bank, consumers unwittingly compound the problems facing the bank. This makes the other options under SRR more difficult to implement as the failing bank's residual value becomes further eroded.
- ▶ If it was considered appropriate by the Authorities to change the levy calculation basis to reflect the level of insured deposits held by banks (i.e., with the level of FSCS limits applied to aggregate eligible customer holdings rather than total deposits), then the fast payout solution would allow banks to provide sufficient data to support a more accurate distribution of the levy in line with compensation exposure.
- ▶ As stated in section 4.10, a number of Study Banks agreed that there may be some additional business benefits that could be leveraged from the fast payout investment, but stated this would be difficult to quantify. Some had strong views that given the limited data set required for an FSCS-based SCV; it would provide very few, if any, direct additional benefits. However, whilst benefits could not be realised by banks directly from the introduction of FSCS fast payout, the banks could use the infrastructure developed to support the scheme as a 'stepping stone' to achieve significant benefits to their organisations. These include:
 - ▶ For those banks without an SCV, building on the FSCS scheme to develop a functioning and appropriate SCV may significantly improve marketing and other communication initiatives.
 - ▶ Cleansing data will enable banks to improve their service levels for their customers.

7.1.3 Benefits to FSCS and FSA

There are a number of benefits to FSCS and FSA from a fast payout solution, irrespective of the fast payout policy choice selections. These include:

- ▶ Understanding what the most appropriate SRR tool is for a particular failing bank. In addition to being a tool within SRR, once implemented fast payout will further enable the authorities to understand the potential fund payout costs for a failing bank. This will allow them to more confidently decide on the most appropriate decision, with respect to other tools within SRR, to maintain financial stability, protect public finance, and protect depositors.
- ▶ The ability to oversee accurate and timely payment of compensation with a flexible payout approach appropriate for the particular failing institution.
- ▶ The improved accuracy of data associated with an SCV could be used to enhance the approach for levy calculations which will be more in line with the actual exposure of an institution to their eligible customers. Clearly this would not affect the total levy collected but could be used to provide a more equitable apportionment.
- ▶ Improvements in the FSCS's and FSA's ability to communicate the process to the public, as the fast payout timescale will be viewed favourably by consumers.

7.2 Macroeconomic analysis of fast payout benefits

The macroeconomic analysis contained within this section explores the potential impact on UK GDP for a move to a fast payout system.

The analysis follows the argument that a fast payout system could lead to an increase in confidence in UK banking. If that is the case, consumers are more likely to either invest or leave their funds in UK banks. If these additional funds held are then channelled into increased investments in the UK economy, there could be higher UK GDP levels than under the current payout model.

7.2.1 Rationale behind the macroeconomic analysis

There is the possibility that in a banking crisis, or simply in a phase of lack of confidence in the banking system, retail depositors could start withdrawing a significant volume of funds from UK banks either transferring them to foreign banks where the national system provides a more extensive coverage, or by holding them as physical cash. This could lead to a significant outflow of deposits causing dramatic liquidity problems to the UK banks, which may be forced to sharply reduce their lending to UK consumers and firms. This reduction in lending and lack of confidence in the system could lead to a reduction in UK firms' investment expenditures and cause a significant decrease in employment. The final outcome would result in a negative impact on GDP.

As witnessed recently, this cycle of negative economic effects can occur if wholesale lenders withdraw funds from banks, even though retail depositors leave their funds in the banking system. Of course, the effects could be worse if retail depositors also withdrew their funds also, and this is more likely to occur given the limited and asymmetric information retail depositors compared to wholesale lenders. In extreme situations, this could result in a bank run, sudden liquidity shortage in the banking system and banking collapse with significant GDP costs to the economy.

The GDP growth level is not closely linked to the level of retail deposits in the national banking system because of the highly developed capital market system. However, the supply of funds from national retail deposits still plays a role in fostering domestic investment as recent economic and empirical evidence has shown. It can be argued that a crisis situation, due to lack of confidence, would lead to a reduction of capital inflows in the UK financial system, and could result in significant deposit withdrawals by retail depositors. The final outcome could be a reduction in the supply of funds available to the economy and investment which could lead to a credit crisis. The effects of this situation in the economy can be substantial as also supported by the academic literature. In particular, two US studies identify the decline in the US money supply immediately after the 1929 crash as a central cause of the great depression¹.

In particular, the fast payout system does not aim to guarantee the total amount of deposits but it could guarantee fast access to cash, which can be argued to be crucial in preventing bank runs and sudden cash withdrawals for precautionary purposes. However, in the future, as the banking system gradually emerges from the current financial distress situation, depositors will regain their confidence in the system. This would hopefully eventually lead to a lower probability of observing bank runs and sudden deposit withdrawals from the system. Within the benefit calculation, a consumer confidence weighting has been incorporated to capture the expected change in the confidence in the banking system over time.

The main impact of the policy change on GDP is limited to the short to medium term as in the long run price levels are likely to adjust to offset at least potentially the GDP effect of the policy change. This also assumes that firms continue to invest despite a possible decrease in consumer confidence and negative market expectations linked to a banking crisis or financial distress of the banking system.

¹ "Financial Structure and Aggregate Economic Activity: An Overview" by Mark Gertler, *Journal of Money, Credit and Banking*, Vol. 20, No. 3, Part 2: Recent Developments in Macroeconomics (Aug., 1988), pp. 559-588. and "A Monetary History of the United States: 1867-1960", Freidman and Schwartz, Princeton University Press 1963

7.2.2 Key econometric variables

The key variables of the macro econometric analysis are the following:

- ▶ The level of protected deposits
- ▶ The value of protected deposits which are increased or maintained, and which stay in the UK banking system as a result of the changing regulation (which contains the proportion of the improvement in consumer confidence attributable directly to the fast payout scheme)
- ▶ The money multiplier is the rate at which deposits in the banking system are translated into total financial resources available to the economy. Therefore, the increase in deposits (or the adverted deposit withdrawal) would determine the extra funds available to the economy due to a change in the regulatory system leading to a general increase in total GDP
- ▶ The propensity to consume, which is used to help calculate how GDP will grow each year as a result of an initial GDP increase (or adverted decrease) due to the availability of funds
- ▶ The market's view on the probability of large-scale retail deposit withdrawals occurring.

7.2.2.1 The level of protected deposits

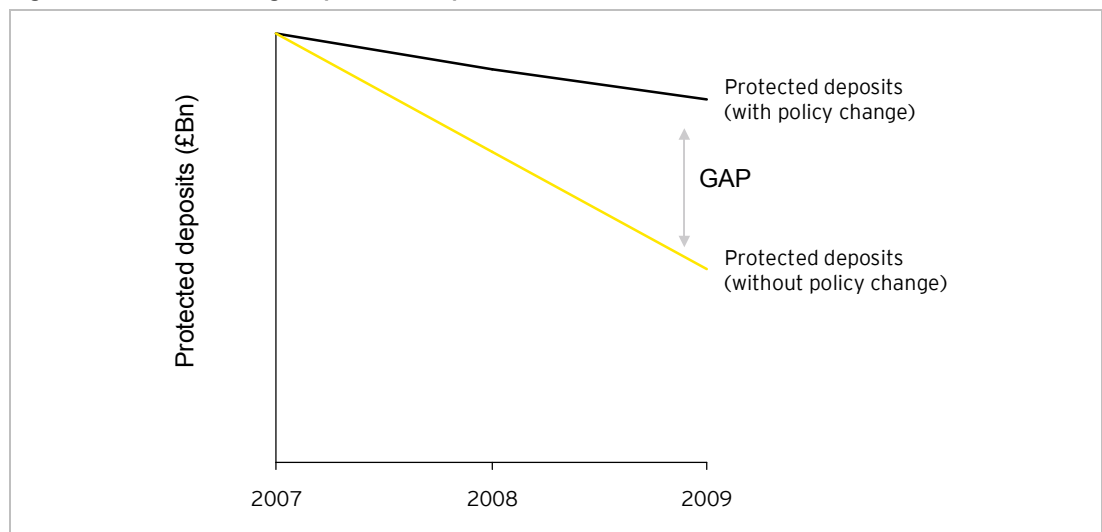
The level of protected deposits is taken from the latest FSA data, which reflects data provided as at 31 December 2007. At that point reported protected deposits for the industry stood at £957bn.

7.2.2.2 The percentage increase or maintained amount of protected deposits

With this analysis we are trying to capture the differences in protected deposits, caused by a fast payout policy change. We are assuming that the market currently has deposits held either in alternative non-banking or non-UK investments, or in cash. It is reasonable to argue that extra liquidity might be held by households for precautionary purposes.

It is expected that the level of protected deposits would fall in the current economic climate, and without a boost to UK consumer confidence that banking reform may provide, our best approximation for this would be based on a percentage of the protected deposits which stay in the system. The diagram below shows this gap:

Figure 9: Illustrative change in protected deposits 2007-2009



Whilst the banking reform proposals, on the whole, are responsible for the gap, fast payout represents one of the policies within banking reform intended to establish confidence in the banking system. Therefore, it can be argued that a proportion of the gap is attributable directly to fast payout. For the purposes of this analysis, we have assumed that the amount of deposits saved by the policy change (the gap) is likely to be low.

As this is a particularly bespoke public policy change, there is no data to support the size of this gap. Therefore, to provide a very conservative scenario for econometric benefit analysis, we have used a value of 0.04% increased protected deposits i.e. an additional £1 for every £2,500 currently deposited by eligible depositors. The conclusion reached under this analysis is, therefore, only a potential scenario rather than a formal projection of economic benefit.

7.2.2.3 The money multiplier rate

The nature of modern financial systems allows deposits to generate more resources. Of each deposit, only a small fraction is actually used to back-up deposit withdrawal and day-by-day liquidity needs, while the remainder is left available for investment purposes. This then circulates into the banking system. The ratio between resources injected into the banking system and actual financial resources available in the economy is commonly called the money multiplier. The money multiplier is used to understand the total increase in funds for investment purposes available in the economy, once a figure assessing the amount of resources injected into the banking sector is available. It should be noted that if UK banks receive more retail deposits, they may lend them to banks in other countries, rather than in the UK. In addition, there is an argument that in the long-run the nominal total of bank lending does not affect GDP, as prices will change to equilibrate the economy. However, the short-term effect of raising lending could be to raise GDP.

This assumes that the banking system is actually willing to lend, which might not be necessarily the case during a credit crisis situation. However, even so, avoiding a sudden withdrawal of deposits may lead to a lower reduction in liquidity in the banking system.

The money multiplier is traditionally calculated as a function of the fraction of resources kept to meet day-by-day deposit withdrawal (reserve ratio), and the amount of resources kept in cash by the economic agents and not injected into the banking system (currency-deposit ratio). Neither figure is available in UK; the reserve ratio varies across banks, and the currency deposit ratio is difficult to determine with any degree of precision. Therefore, an alternative commonly used approach could be to calculate the money multiplier as the ratio of the money supply (M4) and the monetary base (M0).

Between 2002 and 2008 the mid-point of this approach produces a money multiplier of 30², and the lower point is 26. During a period of financial distress of the banking sector, it can be argued that households could hold a larger share of their savings in cash for precautionary purposes, while banks could protect against liquidity shortage by increasing the reserve ratio. The by-product of these two developments could lead to a reduction in the money multiplier. Therefore, for the purposes of this analysis our conservative estimate is assumed at a money multiplier of 20.

7.2.2.4 The propensity to consume

The current propensity to consume in the UK market is 0.8³. This is a value estimated using econometric analysis by the Bank of England. For our conservative estimate, we have assumed that the propensity to consume is 0.6. This value would correspond to a period of high uncertainty where households could undergo a significant amount of precautionary savings due to the uncertain macroeconomic environment. This value is 0.6 is used to understand the increase in GDP occurring in the following years.

² Bank of England statistics: <http://www.bankofengland.co.uk/statistics/index.htm>

³ Bank of England macro econometric model: "Economic Models at the Bank of England, Chapter 2: The macro econometric model", Bank of England, www.bankofengland.co.uk/publications/other/beqm/modcobook.htm

7.2.2.5 The market view of large scale retail deposit withdrawals occurring

There is some argument that current media coverage and level of banking crisis could mean that it is likely that consumer confidence in UK banking is unlikely to recover substantially over the short to medium term. Therefore, for the purposes of this analysis, we have assumed that consumer confidence remains low for the next five years i.e. that the full impact of fast payout benefit is applicable.

7.2.3 Macroeconomic analysis summary

The table below shows the values used in our simple model:

Table 7: Macroeconomic analysis

Analysis components	Conservative scenario
Protected deposit increase (as a result only of the fast payout policy change)	£383m
Money Multiplier	20
Propensity to consume	0.60
GDP growth over a 42 month period of operation (undiscounted)	£10.0Bn

UK GDP is currently £1.4 trillion, and as such this increase represents 0.2% of UK GDP per annum over a 42 month period of operation and is many multiples greater than the estimate of the total cost of implementing the fast payout system.

8. Summary findings, conclusions and recommended further work

This section contains a summary of findings from the fast payout study and relevant conclusions that can be drawn from the analysis. In addition, it also provides suggestions for further consideration in relation to relevant policy and on the practical challenges associated with fast payout execution.

As an overall summary, we conclude from this study that it would be possible to speed up significantly the potential payout of FSCS compensation payments in the case of future bank failures. It would, however, require a significant investment by the banking industry of between £0.4bn to £1.0bn, depending on the approach and fast payout policy options chosen. The transition to a fast payout environment is likely to take up to 18 months.

There are significant potential benefits associated with fast compensation payment including:

- ▶ Improved customer confidence in depositor protection
- ▶ Material wider economic benefits associated with the potential improved consumer confidence in the UK banking system
- ▶ Improved confidence from the Authorities that the FSCS compensation could, if necessary as a last resort, be quickly and accurately distributed to eligible depositors in any banking failure
- ▶ Banks would have more consistent eligible depositor data helping them provide improved customer service and more accurate views on the FSCS obligations and base data for levy calculations
- ▶ Through oversight of the fast payout developments, the FSCS would have better access to higher quality data, plus a greater capability and a wider range of execution options to meet its obligations to customers in failing banks

As noted above introducing fast payout is likely to have a positive impact on consumer confidence, although we recognise that as an intervention option to deal with failing banks compensation payment is likely to interfere with the continuity of some banking services to impacted customers.

8.1 Policy considerations on eligibility account flags

The key findings in relation to the use of electronic FSCS eligibility flags on accounts are:

- ▶ The cost of eligibility accounts flags is a relatively small percentage (13% to 15%) of the estimated overall setup and maintenance cost where an SCV is required
- ▶ Feedback from Study Banks suggest that a major element of ongoing maintenance costs would be associated with up-to-date information to validate eligibility of small businesses
- ▶ The absence of electronic eligibility flags would necessitate, as is presently the case, manual checks and claim forms interaction would be required from customers. This is likely to compromise the core objective of fast payout to the majority of customers in 7 days

Our conclusion is that electronic flags on FSCS eligible accounts are a cost-effective and key component in the speed of execution for fast payout.

8.2 Policy considerations on core solution development and single customer view (SCV)

The key findings in relation to the development by banks of FSCS-style SCV and the core solution are as follows:

- ▶ Through working with the Study Banks and the FSCS our analysis indicates that a bank based focused SCV is key to fast payout under any solution where an effective limit is applied
- ▶ Creating a payout focused SCV for FSCS eligible customers and accounts is costly particularly for the larger banks, which have many individual source systems which must be integrated. Some Study Banks, however, have confirmed that they will be able to leverage existing data warehouse infrastructure to form part of the solution, thus reducing the overall cost
- ▶ Should future policy require banks to provide an accurate point in time view of how their individual customers' aggregate deposits compare to the FSCS limit then they would also need a fast payout style SCV
- ▶ The cost estimates provided in this review are for a standalone solution to provide aggregation, limit checking and storage of the FSCS obligations. Any requirement to make this a real-time SCV or to have the results fully integrated into the banks core operational channels (e.g. internet, ATM) would involve considerable additional cost
- ▶ If the policy remained that compensation payout was only via the FSCS, industry setup and maintenance costs may be reduced by between £60m - £150m

Our conclusion is that for all models of fast payout, the bank based SCV and underlying high quality consistent customer data are key components to the successful testing and potential reliable execution of fast payout.

8.3 Policy considerations on limit aggregation approach

The key findings in relation to the costs and benefits of FSCS limit aggregation by Authorised Entity or Brand or Account are as follows:

- ▶ Initial setup and maintenance costs for the banks based on the application of limits on an Account basis are significantly less than more complex forms of aggregation which require an SCV or equivalent. Consideration should, however, be given to the fact that this is likely to influence customers to open more accounts with the same institutions, increasing the FSCS payout (c. 30% to 50%) for a given bank failure. This in turn would be reflected in increased levy payments by the banks potentially negating this benefit.
- ▶ There is only a small relative difference on an industry-wide basis between the estimated cost of setup and maintenance on either a Brand or Authorised Entity basis. The analysis suggests that the key cost driver in this area is the cost and complexity of obtaining data from the variety of systems used within a bank, which on the whole are not correlated more positively to either a Brand or Authorised Entity structure.

Our conclusion is that the case for using Account based limits is not compelling from an overall cost perspective, and is in conflict with the principle of a fixed limit. In addition, given that there is limited difference between the cost, on an industry-wide basis, between aggregation by Authorised Entity and Brand we conclude that the policy decision should rest on other criteria. Specific considerations to move to a brand based approach, should however, include the key legal, organisational, control and management challenges that this may represent. We suggest that part of the solution could be to provide greater alignment of Authorised entities and significant deposit-taking Brands. This should help in consumer awareness such that unintended risk taking can be avoided.

8.4 Policy considerations on Gross vs. Net payout

The key findings in relation to the policy for paying Gross or Net payout are as follows:

- ▶ Creating a Net SCV is more expensive for most banks to implement compared to a Gross solution. The initial FSCS fund payout may, however, be much less for a Net solution if the failing bank has a significant proportion of mortgage customers with deposit accounts.
- ▶ Net payout is more complex to execute as it requires an accurate point in time calculation of the balance of all credits and loans for an individual customer.
- ▶ Net payout for a bank with a significant loan or mortgage portfolio is likely to cause significant hardship for the customers who would be denied access to their liquid funds, due to longer term debt obligations.
- ▶ Study Banks were in general in favour of a move to a Gross based solution on the grounds of both cost and fairness to customers. They did, however, have a strong and reasonable view that current account overdrafts should be included in Gross calculations.

Our conclusion is that a Net based fast payout solution would be more expensive to implement than a Gross based solution. Importantly all parties felt that a Gross based fast payout was better aligned to the principle of minimised customer hardship.

8.5 Fast payout execution

In summary, given the range of diversity of scale and complexity of firms across the industry, our view is that a variety of payout execution models will be required depending on the type of institution which is failing and the circumstances in which this is occurring. The key considerations by segments of banking industry are as follows:

- ▶ *Large Banks/Very large Building Societies* – The large banks hold a significant majority (over 70%) of the overall protected deposit base, have a large share of current accounts and have a systemically important role in the banking system. In failure, and should other SRR intervention measures not be successful, our study suggests orderly payout is most likely to be achieved by separately providing access to transfer of current accounts and payout of other savings products. Due to their scale in terms of the number of accounts and the potential need to contact a large number of customers in the payout process, final settlement for many depositors is likely to fall outside of the 7 day target.
- ▶ *Mid-Sized Banks/Smaller Banks/Building Societies* – In general, Study Banks in the mid-sized to small bank group also identified significant challenges in many of the payout execution models. Of the models provided, they did favour a cheque based payment, particularly with data transfer through to the FSCS and anticipated the majority of customers could get their compensation in a 7 to 10 day period.
- ▶ *Credit Unions* – Where good quality customer records have been maintained by Credit Unions experience from previous FSCS payouts in this segment would indicate that the current process for claims payout could meet the execution criteria and allow the majority of customers to be paid in 7 to 10 days.

The study has identified a number of alternative solutions to support fast payout execution which require further analysis including:

- ▶ *Use of pre-setup second accounts* – To avoid delays in providing transfer and access to an alternative banking provider, it may be beneficial to consider an industry initiative to help facilitate consumers gaining and providing alternative contingency bank details to their primary provider. In the case of failure of the primary bank, it could then transfer quickly eligible compensation to the alternative provider.
- ▶ *Central standby cheque production capability* – A central standby high volume cheque production capability linked to the FSCS could form part of a fast and cost-effective payout solution.
- ▶ *Running down the bank through existing channels* – Some Study Banks have suggested that intervention similar to that undertaken by the FDIC in the US when they payout by running down a bank may be more cost-effective than fast payout. There are concerns from others on how long this might take and the impact on public order but further work beyond the scope of this study would be required to form a more definitive view on this.

8.6 Additional Policy Requirements

In order to address a number of the operational challenges associated with fast payout execution planning, further work is recommended to define policies and undertake impact assessment in relation to specific account treatments, payout prioritisation and cross-border execution. Specific issues which should be addressed include:

- ▶ Separation of the treatment of current accounts from general deposit accounts in the planning and execution of fast payout
- ▶ Fast payout treatment of tax exempt accounts (ISAs) to preserve the customer benefits
- ▶ Rules supporting the prioritisation of accounts and limit application (e.g. Priority order, Current account/ISA/Savings) where total deposits exceed the FSCS limit
- ▶ Guidance to banks on the treatment of in flight transactions to allow either a second wave of payout for the affected customers or alternative solutions that would provide accurate final total compensation payment
- ▶ Further consideration of how fast payout would operate where UK banks have EEA passported branches and where non-UK based banks are topping up to the FSCS.

Appendix A General definitions used in this report

Term	Definition
Authorised Entity	An entity which is authorised by the FSA to undertake deposit-taking business in the UK.
Bank payout process and infrastructure	The data structures and supporting technology necessary to allow fast payout either through either the banks infrastructure or through allowing data to be transferred to the FSCS for payout.
BBA	The British Bankers' Association is a UK banking and financial services trade association and acts on behalf of its members.
Brand	Brand means a business unit, division, branch or trade name under which the company operates or markets its products to customers.
BSA	The Building Society Association is the trade association for all the UK's building societies.
Core fast payout solution build	The core fast payout solution build includes all hardware, application and system analysis, development and testing costs to create an SCV.
Data cleansing	Data cleansing covers any additional IT and manual data cleansing which is undertaken (e.g. postcode and date of birth) to allow the unique identification of a customer for both sole and proportioned elements of joint accounts.
Deposit-taking institution in UK	A deposit-taking institution receiving funds from UK customers.
Eligibility flag	A "flag" placed on each account to indicate eligibility for FSCS protection. This will provide input for the key areas of focus for eligibility identification, linking accounts, developing a Single Customer View, Gross or Net calculations.
Fast payout framework components	The key components of the payout process necessary to improve the speed of compensation payout.
Fast payout framework key success factors	The key success factors against which the success of the implementation of a fast payout solution can be measured.
Fast payout framework treatment strategies	The treatment approaches used towards individual account types
FDIC	The Federal Deposit Insurance Corporation is the US Federal deposit insurance which protects deposits in the United States.
FSA	The Financial Services Authority is the regulator of all providers of financial services in the UK.
FSCS	The Financial Services Compensation Scheme is a financial compensation scheme which operates in the event of the failure of authorised firms.
FSCS payout process and Infrastructure	The control of, and automated process for, checking and, as appropriate, the payout of compensation.
Gross payout	Gross payout is payment of compensation by the FSCS, the total of which does not include debts owed by the depositor
In – flight transactions	Transactions which have entered the clearing process but have not settled at a given point in time.
Limit checking	FSCS limit checking based on holdings of eligible accounts to support payout processing.
Net payout	Net payout is payment of compensation by the FSCS the total of which does include debts owed by the depositor.
Retail Customers	Eligible customer accounts including small businesses and sole traders (as described under the FSCS rules).
Single Customer View (SCV)	A reliable and consistent view of eligible aggregate customer deposit positions (for a Gross basis) or eligible aggregate customer deposit and outstanding loan positions (for a Net basis). Specifically, for the purpose of this study, this means ensuring that the bank can create the data table defined in Appendix B.
Special Resolution Regime (SRR)	A special resolution regime which gives the Authorities a range of tools to achieve a more orderly resolution of a failing bank.
Transaction Account	An account which is used frequently to make and receive payments (this may include current accounts or some types of saving accounts).

Appendix B Data requirements of Single Customer View (SCV)

The following tables indicate the minimum information required for SCV records and subsequent fast payout processing.

Minimum SCV data requirements for bank based payout

This table provides details of the fields required to be maintained by the banks for fast payout processing and associated inspection by FSA/FSCS. This will be used as appropriate for payout execution models 1-3.

Field identifier	Field descriptor
Customer details	
SCV record number	Unique record identifier
Customer name	Full name of customer
Any former names of account holder	If identified
National Insurance number	Where held
Contact details⁴	
Full Address	House name, House number, Street name, Town/City
Address postcode	As mailing address
Address country	As required
Details of account(s)	
Account title	Surname or company name, first name, any other account initials or middle name identifier
Account number	Unique number for this account
Product type	Type of product or service – deposit/investment
Account holder indicator	Any field or identifier which can be used to identify the relationship between the account holder and the account e.g. Joint, single, children, trust, nominee
Account status code	e.g. active, open, closed, dormant
Account balance	At end of business of agreed date
Aggregate balance across all accounts	At end of business of agreed date
For Net payout only – Details of loans/mortgages/credit cards and overdrafts	
Loan title	Surname or company name, first name, any other account initials or middle name identifier
Loan account number	The unique number for this loan
Loan account holder indicator	Any field or identifier which can be used to identify the relationship between the account holder and the account e.g. Joint, single, children, trust, nominee
Loan balance	At end of business of agreed date
Aggregate loan balance across all accounts	At end of business of agreed date
For deposit and loan accounts – Interest details	
Accrued interest	Interest accrued but not paid – if applicable
Tax status of account	Where detailed – Gross or Net payments

Minimum SCV data requirements for FSCS based payout

The following table provides details of the fields required to be maintained by the banks for transmission to the FSCS for aggregation, limit calculation and payout using execution model 4. Banks may provide multiple records covering deposits and separate extracts covering loans, as long as the header files contain accurate customer and contact details.

⁴ Other contact information such as an email address, home telephone number or mobile telephone number would also assist in deciding if two customer records are attributable to the same customer where all other information collected is the same or similar.

In circumstances where multiple extracts are provided, where possible, unique customer record numbers should be used within customer details.

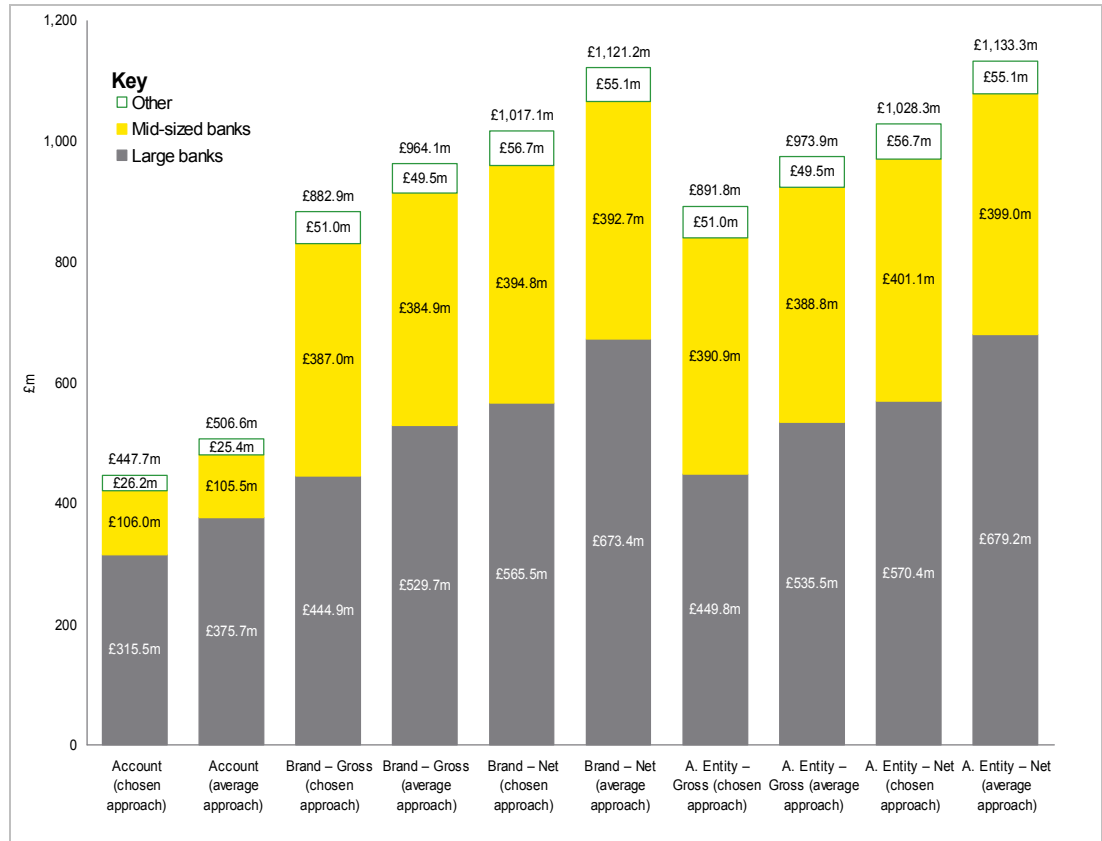
Field identifier	Field descriptor
Customer details	
Unique customer record number	Unique record identifier
Customer name	Full name of customer
Any former names of account holder	If identified
National Insurance number	Where held
Contact details⁵	
Full Address	House name, House number, Street name, Town/City
Address postcode	As mailing address
Address country	As required
Details of account(s)	
Account title	Surname or company name, first name, any other account initials or middle name identifier
Account number	Unique number for this account
Product type	Type of product or service – deposit or investment
Account holder indicator	Any field or identifier which can be used to identify the relationship between the account holder and the account e.g. Joint, single, children, trust, nominee
Account status code	e.g. active, open, closed, dormant
Account balance	At end of business of agreed date
Aggregate balance across all accounts	At end of business of agreed date
For Net payout only – Details of loans/mortgages/credit cards and overdrafts	
Loan title	Surname or company name, first name, any other account initials or middle name identifier
Loan account number	The unique number for this loan
Loan account holder indicator	Any field or identifier which can be used to identify the relationship between the account holder and the account e.g. Joint, single, children, trust, nominee
Loan balance	At end of business of agreed date
Aggregate loan balance across all accounts	At end of business of agreed date
For deposit and loan accounts – Interest details	
Accrued interest	Interest accrued but not paid – if applicable
Tax status of account	Where detailed – Gross or Net payments

⁵ Other contact information such as an email address, home telephone number or mobile telephone number would also assist in deciding if two customer records are attributable to the same customer where all other information collected is the same or similar.

Appendix C Comparison of extrapolation approaches

The chart below compares the chosen approach, used within the report, for extrapolating the Study Bank data to estimate the total industry setup and maintenance costs with a much simpler average comparison approach.

Chart 6: Total industry setup and maintenance costs under both extrapolation methodologies, by bank segment



In the chosen approach, to estimate the total industry setup and maintenance costs for banks in each bank segment (as defined earlier), non-Study Banks were compared to the Study Bank according to their size, the complexity of their organisation and their known IT environment. These three factors were assumed to be proxies for the level of organisational fast payout setup and maintenance cost against those banks in our study. Our approach has been based substantially on high level estimates, but creates an output that is logical given our understanding of how industry costs are likely to be incurred.

In the average comparison approach, the average of each segment’s Study Bank costs was multiplied by the number of banks in the corresponding segment. This approach requires significantly fewer variables to develop. However, Study Banks are not simply an average bank, and therefore this could create results at the aggregated level which do not reflect differences for individual banks and therefore appear to be inaccurate.

The chart on the previous page (chart 6) shows that:

- ▶ Extrapolated costs using the chosen approach are slightly lower than using a simple average approach by between £59m and £105m.

- ▶ This difference is not consistent across segment. The large bank segment has a lower cost using the chosen approach but in other segment costs on the chosen approach were higher than using the simple approach.
- ▶ The reason for this is that the study banks do not exactly equate to an 'average bank', and as such there are differences in the total cost for particular segments. In the large bank segment, the study banks had greater complexity and size than the expected average bank. This meant that the expected costs for other banks in that segment would be lower using the chosen approach (capturing complexity and size) than under a simple average approach which just multiplies the average of study banks by the number of banks within the segment. The opposite effect was seen in other segments, where the study banks had a lower complexity and size than the theoretical average bank in their segment. In those sectors, the extrapolation under the chosen approach yielded a higher total setup and maintenance cost for other banks in those segments than under the average comparison approach.

The conclusions reached within this report would not be undermined or altered under either extrapolation approach. Whilst the difference between the chosen and average comparison approach is significant, it is not material. We conclude that the chosen approach is the most appropriate for use within the paper as the results appear to be more accurate.

Appendix D Ernst & Young contact details

Please use the following Ernst & Young contacts as required for any queries or further information relating to this report.

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