

FACTORS AFFECTING THE COST-EFFICIENCY OF ELECTRONIC TRANSFERS IN HUMANITARIAN PROGRAMMES



Photo: Oxfam

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ABBREVIATIONS

ACF	Action Contre la Faim
AMISOM	African Union Mission in Somalia
ATM	automated teller machine (= cash machine)
CaLP	Cash Learning Partnership
CIFA	Community Initiative Facilitation Assistance
DFID	Department for International Development
ECHO	European Community Humanitarian Aid Office
ERP	Emergency Relief Programme
e-payments	electronic payments
e-transfers	electronic transfers
HH	household
KES	Kenyan shilling
M&E	monitoring and evaluation
MFA	Ministry of Foreign Affairs (Norway)
MRP	Marsabit County Emergency Response Programme
NGO	non-governmental organisation
OPM	Oxford Policy Management
PIN	personal identification number
PISP	Pastoralist Integrated Support Programme
POS	point of sale
SMS	short message service (= text message)
UBL	United Bank Limited
UN	United Nations
USAID	United States Agency for International Development
WFP	World Food Programme

GLOSSARY

Administrative cost	All the costs of operating a cash transfer programme, other than the sum disbursed to beneficiaries. Includes salary and nonsalary costs, at headquarters and in the field.
Agent	An entity or retail outlet where an e-transfer can be redeemed for cash.
Cost-efficiency analysis	The study of the administrative cost of a cash transfer programme relative to the amount disbursed
Cost-effectiveness analysis	The study of the administrative cost of a cash transfer programme relative to its effectiveness (the extent to which it has met its objectives, e.g. increased consumption or dietary diversity)
E-transfer	Electronic transfer. A form of value transfer that uses a device such as a SIM card, e-voucher, magnetic stripe card, chip-and-pin card, etc., and that relies on digital payment systems.
Mobile money	Digital currency stored in an 'electronic wallet' on a mobile phone.
Mobile token	A form of mobile transfer used to collect cash but not to make purchases (cf. mobile voucher).
Mobile transfer	A form of e-transfer which occurs over the mobile network.
Mobile voucher	A form of mobile transfer used to collect goods (or services) but not cash (cf. mobile token) where authentication occurs over the mobile network
Payment provider	The service provider for the payment mechanism, e.g. a bank or mobile network operator

PREFACE

Cash is increasingly offered to households as an alternative to in-kind aid, to improve food security and to meet a variety of essential needs in emergencies. Under certain conditions cash transfers can have advantages over other instruments, such as greater acceptability, utility and flexibility for people affected by disasters. There is widespread interest in the potential additional benefits that can come from delivering this cash using technology such as mobile phones or electronic bank cards—so-called ‘electronic transfers’ or ‘e-transfers’—rather than by hand. This is part of a wider move towards exploring how mobile technologies can contribute to improving the efficiency and effectiveness of the entire process of humanitarian response, from enrolling beneficiaries and verifying their identity to maintaining administrative records and assessing programme outcomes.

It is sometimes asserted that cash transfer programmes are relatively more cost-effective than in-kind programmes; and that electronic transfers (e-transfers) are in turn more cost-effective than manual cash transfers. However, in some contexts the opposite can be true. Until now evidence on the cost-effectiveness of these programmes has been limited. The Cash Learning Partnership (CaLP) (www.cashlearning.org) has therefore commissioned Oxford Policy Management (OPM) and Concern Worldwide to conduct the present research. It aims to fill the knowledge gap through a set of case studies that illustrate the cost of e-transfer and manually delivered programmes in emergencies and that identify the factors that drive those costs.

This research outlines a methodology for assessing cost and offers detailed case studies of the cost of running recent emergency cash transfer programmes in Kenya and Somalia, drawing on e-transfer and manual cash programmes run by Oxfam, Concern Worldwide and SOS Children’s Villages. It supplements this with an overview of other recent programmes that illustrates how e-transfers are being used in other country contexts. The analysis highlights some of the key factors that affect the cost of e-transfer programmes. It also explains why ‘low-cost’ does not always equate to ‘best value for money’, and notes other considerations to be taken into account when deciding whether an e-transfer is the appropriate delivery mechanism in a given emergency context. It makes recommendations of ‘next steps’ for humanitarian actors, donors, governments and service providers. It is hoped that the findings of this research will be relevant for policymakers and humanitarian actors during future programme design.

The study is one of a series of three pieces on e-transfers by CaLP, the others being a set of guidelines to support programme implementation, and a code of conduct for data protection.

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EXECUTIVE SUMMARY

BACKGROUND

Cash is increasingly offered to households in humanitarian emergencies as an alternative to in-kind aid. Under certain conditions cash may have advantages over other instruments, such as greater acceptability, utility and flexibility for people affected by disasters. There is now widespread interest in the additional benefits from delivering cash using technology such as mobile phones or electronic bank cards—'e-transfers'—rather than manually. However, several barriers have impeded the take-up of the technology, of which one is their cost. The Cash Learning Partnership (CaLP) has commissioned this research to find out more about the cost of using electronic payment mechanisms (e-payments) for emergency cash transfers.

The central research question is: are e-transfers more cost-effective than traditional manual cash delivery methods, and under what conditions? This is explored by examining the cost and, where possible, the outcome of seven emergency cash transfer programmes in two countries, Kenya and Somalia: two cases that use a manual payment mechanism, four using mobile money and one using a smart card. These cover cash transfers in urban and rural areas between 2009 and 2013.

THE FRAMEWORK FOR THE RESEARCH

Scope and limitations of the study

The study provides a *cost-efficiency* analysis for all seven cases, with information on *effectiveness* where known. Cost-efficiency analysis means calculating the administrative costs of delivering a transfer. Cost-effectiveness analysis would compare this with the size of the outcome, such as improved food consumption or dietary diversity; this is generally not possible for emergency cash transfers because they do not have control groups and the programmes vary enormously, but by looking at regular monitoring reports we can verify if they had a positive outcome. By agreement with CaLP the study does not attempt *cost-benefit* analysis, including e.g. assigning a monetary value to abstract concepts such as a sense of security, which would have required large-scale surveys that are considerably beyond the scope of the study.

Findings on cost-efficiency cannot be used to judge which programme offered best value for money because they were implemented in vastly differing contexts of famine, drought and political insecurity, in urban and remote areas, with beneficiary numbers ranging from 500 to over 12,500. However, we present each case study in a similar way, as a starting-point to explore the variation in cost-efficiency. The ways in which the context affects the cost is central to the discussion.

The term 'administrative costs' covers everything spent by implementing partners other than the transfer received by the beneficiary. It includes not only direct purchases such as for transport, printing or buying phones or bank cards, but also the estimated value of time spent by staff for everything from proposal-writing and contract negotiation to fieldwork supervision, monitoring and evaluation. It therefore covers expenditure that NGOs may refer to as direct and indirect programme costs, operating costs, management costs or support costs. It should not be confused with the narrower concept of 'overheads'. It is often bigger than the budget agreed with the primary donor because agencies and payment providers can incur costs that they absorb from their own resources. It does not include expenditure by beneficiaries, which would need large surveys to ascertain and which might have been inaccurate given that several programmes finished some time ago.

How to measure cost

The study has taken agencies' regular accounting data on expenditure by line item (salaries, fuel, communications etc.) and converted this into a summary of expenditure by activity, by working with the agencies to identify the purpose to which the resources were put. Activities have been grouped under seven headings: (i) Programme design; (ii) Institutional arrangements e.g. contract negotiation; (iii) Communication / advocacy; (iv) Training; (v) Targeting and registration of beneficiaries; (vi) Disbursement of the transfer and (vii) Monitoring and evaluation (M&E). These activities have been further grouped into 'one-off' expenditures—mostly the start-up costs that will not need to be repeated unless the programme changes its design, location or beneficiaries—and 'recurrent expenditures' associated with the regular disbursement of cash.

OUTLINE OF E-PAYMENT MECHANISMS

CaLP's guidelines on the implementation of e-transfers identify three payment mechanisms: card-based systems, mobile-phone-based systems and electronic vouchers (Sossouvi, 2013).

- Card-based systems use a magnetic stripe card, or a smart card with either chip-and-pin or 'contactless' technology. Magnetic stripe cards are linked to an account and need a network connection at the point of use, while smart cards need neither: some, e.g. sQuid's smart card in Kenya, store value on the card itself. Smart cards can also store information about transactions locally on the card and upload it to a central system later. Both types require the merchant to have a point-of-sale (POS) device to read the card.
- Mobile phones deliver cash transfers through mobile tokens, mobile vouchers or mobile money. Tokens are not discussed here because the phone is only a communication device, not a way of transferring money. Vouchers are electronic substitutes for paper vouchers. Mobile money systems, such as Kenya's M-Pesa, allow the user a wide range of options such as withdrawing cash, transferring funds directly from their account to another individual, paying bills, paying for goods with registered merchants, or buying credit for phone calls.
- Electronic vouchers are like mobile vouchers except that the transaction is authenticated over the internet rather than by phone. These are not discussed further here.

RECENT GLOBAL EXPERIENCE WITH E-TRANSFERS

Many emergency relief programmes using card-based payments are in Asia, Latin America and the Middle East, where banking infrastructure is generally better developed than in Africa. It requires either established banking infrastructure, or a willingness on the behalf of implementing agencies to expand 'branchless banking' channels, e.g. cash machines (ATMs) and POS devices in shops, which requires prior investment in electricity and mobile networks. In Africa, where infrastructure is poorer, the use of card-based technology depends on programmes operating either in areas with connectivity and branchless banking channels, usually urban areas, or on agencies investing in their own systems. Recent examples of where card-based systems have been used for emergency relief include support for flood-affected households in Pakistan and the Philippines, and assistance to Syrian refugees in Lebanon and Jordan.

The rapid growth in mobile network signal coverage, phone ownership and mobile money services has increased the potential for using mobile-phone-based payment systems. In Africa, mobile networks have developed faster than formal banks. Mobile-money services have been tested in the humanitarian context in several countries including Malawi and Côte d'Ivoire. Kenya and Somalia have among the world's most widely used mobile-money systems. The payment mechanism has been tried by a number of humanitarian agencies in those countries, particularly in urban areas.

CASE STUDY OF KENYA

Context

Kenya is vulnerable to regular climate shocks such as droughts and floods. In rural areas such disasters directly affect livelihoods, while for urban citizens food shortages typically result in price rises. Droughts and accompanying food price hikes have occurred twice in Kenya in recent years, in 2009-10 and again in 2011-12. Our case studies refer to responses to these disasters.

We noted above that the choice of payment mechanism depends on the available infrastructure. Kenya's banking sector expanded rapidly from 2006 to 2008, mainly in urban areas, and has seen further growth since then, including in rural locations. In Nairobi over half the population has now used formal banking services, twice the rate in the former Eastern province (26%) where two of our case studies are located. The rate in rural areas is improving but many people still live a long way from banks and incur greater transport costs to reach them than in an urban environment. Mobile network signals cover some 95% of the population. Very remote areas have less good coverage. The ratio of phones to the population is high. Safaricom is significantly ahead of its three competitors in terms of market share, with nearly two-thirds of Kenya's mobile-phone subscribers. Safaricom transformed access to financial services in 2007 when it launched its mobile-money service, M-Pesa. M-Pesa is now estimated to have some 16 million users, overtaking in popularity all other forms of financial service. The other network operators also have a mobile-money service.

The cash transfer programmes reviewed in Kenya include one using M-Pesa in an informal settlement in Nairobi, implemented by Oxfam; one using a smart card, the sQuid card, for pastoralists in Marsabit, implemented by SOS Children's Villages Kenya; and a programme by Concern, also in Marsabit but using manual payment of cash through local traders.

Oxfam's emergency cash transfer through M-Pesa in Nairobi

Oxfam and Concern Worldwide formed a consortium to respond to the food crises of 2009-10 with an 'Urban Livelihoods and Social Protection Programme' in informal settlements in Nairobi. Oxfam's contribution, analysed here, included monthly cash transfers of \$19 from October 2009 to March 2011 via M-Pesa to up to 2,800 households in the Mukuru area. Transfers were delivered in three phases, funded by SIDA, the Tolkien Trust and Oxfam Appeals for around six months each. The programme seems effective in that food security among beneficiary households improved during its implementation.

The programme spent about \$361,000 in administration to deliver about \$565,000 to beneficiaries. This means it cost \$64 to deliver every \$100 of transfers, or \$12 per transfer (cost-transfer ratio = 0.64). This average of \$12 obscures a reduction in costs per transfer from around \$14 in the first phase to around \$6 in the last. The programme became cheaper over its 18-month duration as each phase required less investment in one-off activities such as targeting, training and contracting. Recurrent costs also decreased as implementers and beneficiaries became familiar with the technology.

Out of the \$361,000 spent on administrative costs, close to \$200,000 was devoted to setting up the programme. Of this, some \$45,000 was spent on registering beneficiaries onto the programme, though most was for staff costs to identify beneficiaries rather than M-Pesa-specific registration costs. There was considerable expenditure on advocacy and on contracting, as Oxfam bore the cost of leading the consortium and encouraged new funders to join for the later phases. These other set-up costs, and other one-off activities such as an evaluation, had very little to do with Oxfam's use of M-Pesa. Recurrent costs used \$127,000 of administrative expenditure, of which Safaricom's transaction fee was a consistently small proportion, the rest being largely staff time for programme oversight and regular monitoring activities.

While any programme is likely to see higher administrative costs in its set-up than in later stages, the difference between these early and later costs is more pronounced with mobile money than with manual cash because of the complexity of starting the programme and buying equipment and the substantial later reduction in staff oversight. The question is whether mobile money used for a single emergency is likely to issue enough payments to reach the point of greatly improved cost-efficiency that results from repeated transfers, because even after 18 months of operation—far longer than any other programme reviewed here—the cost-transfer

ratio remained high. One of the benefits of having used mobile money in this instance is that, by allowing agencies and their partners to get to know the technology, subsequent mobile-money programmes may run smoothly and more cost-efficiently.

SOS Children's Villages Kenya (SOS Kenya) with sQuid—Marsabit emergency

SOS Kenya provided transfers of \$87 a month to 2,000 households in Marsabit, northern Kenya, from October 2011 to May 2012 to improve food security. The transfer was paid via a smart card issued in partnership with a private company, sQuid. Most (\$75 a month) of the money was loaded onto the card as an electronic food voucher, with the remainder as a cash 'e-wallet' for general use. Beneficiaries had to use the card at three designated stores that had been given a POS terminal. The smart card was used because the Safaricom signal was too poor in Marsabit for M-Pesa to be feasible; and banks were far from beneficiaries and proposed to charge a high transaction fee. sQuid offered SOS Kenya a low transaction fee of 1% and its card allowed the agency to ring-fence most of the expenditure for food, which would not have been possible with a regular bank card.

SOS Kenya and its partners spent about \$204,000 to deliver nearly \$1.4 million to beneficiaries, giving a cost-transfer ratio of 0.15 (\$15 administration for every \$100 of transfers). Each monthly transfer therefore cost \$13 to deliver. Most went on one-off set-up costs; recurrent costs were quite low. The smart card has had little impact on the one-off costs: about 90% of design costs, and much of the other start-up costs such as the enrolment of beneficiaries, would have happened under any payment mechanism. The purchase of the POS terminals and the cards cost less than \$14,000. SOS Kenya spent quite a lot on assessing merchants to be partners for the food voucher, a resource-intensive job that they would have had to do with paper vouchers, and also on public relations materials that are linked to the fact that they used new technology but that are not intrinsic to the mechanism. As for recurrent expenditure, the main consequence of the smart card was that poor network infrastructure meant the implementing partners travelled repeatedly to Nairobi to load the value onto the cards as they could not get a phone signal in Marsabit.

Despite this extra expense caused by piloting technology before the network infrastructure was fully developed, the programme appears reasonably cost-efficient for two reasons. First, sQuid was keen to trial the method and so offered a substantial discount. Second, the monthly value loaded onto the card was high—more than four times that of Oxfam's M-Pesa programme—so administrative costs were offset against more transfers.

Concern Worldwide—Marsabit County Emergency Response Programmes

Concern Worldwide has also been delivering cash transfers in Marsabit, but using a manual payment mechanism. In September 2012–March 2013 it provided six months of transfers to 700 households in Moyale and Sololo, at \$39 a time, and to 300 households in Chalbi at \$26 per transfer because of cheaper market prices there. It followed an earlier phase where they had been supporting 2,000 households after the 2011–12 drought. Cash was paid by local traders who made their own arrangements to obtain liquidity, disbursed the money and claimed it back from Concern.

Administrative costs to deliver the \$204,000 of transfers totalled around \$59,000 (cost-transfer ratio = 0.29). This means each \$39 transfer cost about \$11 to deliver. Concern's manual programme cost only a fraction of SOS Kenya's to set up (\$44,000 vs. \$156,000). This is because it was building on a previous intervention, so the costs of setting up the office, training staff, and targeting and registration beneficiaries were almost eliminated. Some costs were also reduced because the programme was half the size (1,000 households instead of 2,000) but even if they had been the same size the Concern programme would have retained its benefits of following on from its earlier work. Conversely, SOS Kenya's card-based approach was relatively more cost-efficient during the subsequent distribution of the transfer. One major contribution to Concern's relatively higher disbursement costs were the higher transaction fees charged by local merchants for distributing cash (averaging 8% in Moyale and Sololo and 3% in Chalbi, compared with sQuid's 1% fee). SOS Kenya's programme was more attractive to its payment provider as sQuid actively sought involvement, thereby enabling SOS Kenya to negotiate a reduced fee.

CASE STUDY OF SOMALIA

The 'south-central' region of Somalia, i.e. the area outside the largely autonomous regions of Somaliland and Puntland, is governed by no single authority. It is variously administered by individual clans, the militant group Al-Shabaab, international military peacekeepers, and the Somali Federal Government that was formed in 2012. Repeated conflicts between groups have caused large-scale disruption to agricultural and pastoralist communities. The area experienced a crisis in 2011 when, as in Kenya, it suffered a drought that made it hard for pastoralists to earn a living. At the time an estimated 1.4 million people were internally displaced, often to camps around Mogadishu. Famine was declared in July 2011, triggering a massive response by NGOs. The humanitarian programme coincided with a much improved harvest in late 2011 and the famine in the south was declared over in February 2012, though many households continued to need assistance.

There are few feasible options for NGOs wishing to deliver cash in Somalia. The financial services sector is dominated by money transfer (*hawala*) agents in the absence of formal banking. There was no central bank in south-central Somalia until 2012; there are no registered private banks, no ATMs and no POS terminals in stores. In 2011 two mobile phone companies, Hormuud and Nationlink, launched mobile-money services which have quickly become popular in view of Somalia's huge appetite for telecommunications. The services are currently free as phone operators see them as a means to attract customers.

We review here four cash transfer programmes delivered by Oxfam and Concern Worldwide in Mogadishu during the crisis and post-crisis phases from September 2011 to September 2013. One was delivered manually via *hawala* agents, and the other three by mobile money.

Oxfam's cash transfer programme delivered through *hawala* agents

Oxfam supported 12,500 households with six rounds of transfers of \$75 between October 2011 and July 2012. Oxfam implemented the programme together with a local partner, Hijra, who enrolled beneficiaries and made sure payments were delivered correctly each month. Hijra also monitored the programme outcomes; these showed that households' food security had improved during the project, though the size of the benefit attributable to the programme cannot be quantified as there was no control group and there was a greatly improved harvest during the period.

The programme disbursed \$5.6 million to the beneficiaries via *hawala* agents, incurring administrative costs of \$1.2 million (cost-transfer ratio = 0.20). Each \$75 transfer therefore cost \$15 to deliver. About one-quarter of the administrative cost went on one-off costs, mostly those at the start of the programme; the remaining three-quarters was spent on the recurrent distribution of transfers. This contrasts greatly with the three programmes in Kenya where the bulk of administrative costs were spent on setting up the programme.

One-off costs were made considerably cheaper by Oxfam's decision to select a manual payment mechanism. The use of a mechanism familiar to everyone (the mobile money scheme was only just being launched) reduced the expenditure—and, crucially for the famine context, the time—spent on designing a new method and training the implementing partners. Moreover, it saved more than \$200,000 that might otherwise have been needed to purchase mobile phones for every recipient. Much of the other one-off expenditure was unaffected by the choice of mechanism, including a considerable investment in the independent evaluation.

The recurrent costs related to the use of *hawala* agents consisted mainly of the staff time of Oxfam and Hijra to oversee disbursement—around \$150,000-\$200,000 over the project—and the 2.5% commission paid to the *hawala* agents. This fee was a compromise between the 1.5% originally agreed, and the 7% that they requested once they realised the size of the task: they had to set up temporary paypoints to cope with demand, and to open on Fridays especially for the beneficiaries so that they did not get in the way of their regular customers.

There would have been little difference in cost if Oxfam had run a programme of this size using mobile money rather than *hawala* agents. The extra \$200,000 or so spent overseeing the manual distribution would have been equalled by the amount spent on mobile phones for over 12,500 participants. In this case the context of the programme, particularly the need for a rapid response during the famine, meant that the choice of the *hawala* agents was a favourable one.

Oxfam's E-cash pilot

In mid-2012 Oxfam tested the mobile money system in south-central Somalia for the first time with one payment of \$150 to 2,090 people in Mogadishu. It spent \$140,400 in administration to deliver around \$313,500 in transfers (cost-transfer ratio = 0.45), so the transfer cost \$67 per person. At first sight this seems much costlier than for any other cases reviewed; but this is because of the expense of testing an innovative mechanism, and also the impossibility of achieving economies of scale with only a single transfer. If the \$79,000 of set-up costs had been spread across many transfers then the cost-transfer ratio would have declined considerably. This, though, was not the objective of the project since its purpose was to test the payment mechanism. One-off costs are therefore substantial, while the recurrent cost of disbursement almost disappears. This confirms that the one-off costs of setting up a mobile money cash transfer greatly exceed those of setting up a programme with a *hawala* agent. The cost of disbursing each transfer is, as would be expected, cheaper when using mobile money, but that activity makes up a tiny proportion of administrative costs and in no way compensates for the higher start-up when used for a single transfer.

However, to judge the programme negatively for its higher administrative costs would be to miss the point that the E-cash pilot was testing the mechanism and had no opportunity to offset its high enrolment cost against numerous transfers. The lessons learned were valuable in demonstrating the feasibility of using mobile-money payments for subsequent programmes such as those run by Concern Worldwide. This illustrates that it costs money to be an innovator. For this reason cost alone should not be the determining factor in choosing a payment mechanism, since a programme that appears costly when viewed in isolation may be generating learning for later interventions.

Concern's mobile money programmes

Since Oxfam's pilot, Concern has used mobile money exclusively for the cash transfer component of its aid programmes. To date it has used mobile money alone—i.e. with no accompanying food voucher programme—for three programmes in Mogadishu, of which two are reviewed here: the ECHO- / Concern-funded Conditional Cash project to 500 households from November 2012 to August 2013 (who each received 10 transfers of \$100), and a short project funded by the International Organization for Migration (IOM), from March to May 2013, providing \$80 per month to 905 households. Concern implemented the programmes itself, and contracted both Hormuud and Nationlink to deliver the cash, using a 'cash facilitator' in Dubai to transfer funds to the Somali accounts. These programmes differ from Oxfam's E-cash pilot in that they distributed a smaller value transfer but many more times. In addition the ECHO project imposed education- or health-related conditions on its recipients.

Post-distribution monitoring data for both the ECHO and IOM programmes indicate an improvement in living standards among the beneficiary population during the programmes, though we cannot state the extent to which this is a direct effect of the cash transfers as we have no data on changes among non-beneficiary households for comparison. Households report an increase in the number of meals consumed per day for by both adults and children, and a more varied diet. Data from the final monitoring exercise for each programme also review their operations; these show that beneficiaries all say they received the correct amount. The IOM data reports no instances of corruption and few problems with the technology. Among ECHO respondents most reported that mobile money was easy to use, though one-quarter said they had had some problems and one-third said they would rather receive food.

The ECHO programme spent just under \$100,000 to deliver the \$500,000 to its beneficiaries (cost-transfer ratio = 0.18). The IOM programme reports very low administrative costs, at just under \$23,000 to disburse the \$217,200 of payments, giving it the lowest cost-transfer ratio of all of the seven case studies, at 0.11. Two factors explain why these programmes cost less to deliver than the E-cash pilot and Oxfam's cash transfer through *hawala* agents, neither intrinsic to the use of mobile money. First, they were able to take advantage of the substantial investment made in previous interventions: there was no need to design procedures, train the mobile network operators, or develop M&E tools. Second, they disbursed larger sums than the E-cash pilot.

As for the difference between the ECHO and IOM programmes, the IOM cash transfer made great efficiency savings by being a 'repeat prescription' of an earlier intervention. It even used the same beneficiaries, who had

already been given a phone and trained previously. So there were almost no set-up costs other than to write a proposal and make a short trip to communities to say the funds were being restarted. In comparison the ECHO Conditional Cash Programme, being the earliest of Concern's mobile-money-only transfers with a new caseload of beneficiaries, bore more initial set-up costs. There was a slightly longer design phase, during which the team had the additional task of going to the field to agree the most appropriate conditionalities for benefit recipients. They also paid for phones and training for beneficiaries. The disbursement of cash took place along similar lines for both cases.

There were also almost no costs to the beneficiary for participating in the programme because the phones had solar-powered chargers; there was no need for transport to collect the cash; and no transaction fees were charged by the mobile network operators.

CONCLUSIONS

The case studies lead us to the following nine conclusions:

1. Many costs of running an emergency cash transfer programme have little to do with whether an agency chooses an electronic or manual payment mechanism.
2. Of the costs that do depend on the payment mechanism, the evidence does not suggest that e-transfers are systematically cheaper than manual transfers. The answer to the key research question, 'Are e-transfers more cost-effective than traditional manual-based cash delivery methods?' is therefore, 'Not necessarily'. E-transfer schemes incur a much higher cost at start-up, especially at the first time of implementation, but have reduced costs for disbursement later. It is only after several transfers that the reduction in recurrent costs starts outweighing the heavy one-off costs. A programme may not reach the point of this payoff until long after the emergency ends.
3. Many costs in any context, for any payment mechanism, are negotiated rather than fixed. Such negotiations can make a difference of tens or hundreds of thousands of dollars to the cost of running a programme.
4. Humanitarian agencies will therefore save money if they make their cash transfer proposition an attractive prospect for the payment provider. Payment providers that have an incentive to gain new customers may offer favourable rates; those whose regular business is hampered by the demands of responding to hundreds or thousands of beneficiaries are likely to request high transaction fees.
5. The general state of infrastructure development has a huge impact on the cost to an agency of using e-payments for emergency programmes. The cost is driven by the state of banking and communications infrastructure—electricity, mobile phone masts, national payment systems for bank cards—which has nothing to do with their use in emergency cash transfers. This is why a payment mechanism that is ideal in one location may be prohibitively expensive in another.
6. It is possible for a humanitarian cash transfer programme to try to drive innovation in the development of the requisite national infrastructure but this is likely to be hugely expensive and risky and may take too much time in an emergency.
7. The amount of new activity required in any aspect of a humanitarian programme, not just in relation to its payment mechanism, is a key determinant of its cost. A programme that is designed from scratch, perhaps with new partners or in a new location, is necessarily more expensive than one that builds on a previous programme. Costs are further reduced if the programme uses the same beneficiaries, especially if they have previously been given equipment such as phones.
8. There is therefore a risk that if cost is the driving force in the selection of a payment mechanism then innovation of all types will be lost, because innovation costs money. This includes even activities fundamental to a cash transfer programme, such as registering new beneficiaries or moving to a new location. Higher administrative costs can therefore be desirable in certain contexts: cost should not be used as a reason for not re-targeting a programme if needed.
9. Together these conclusions mean that when an agency selects a payment mechanism, from amongst all those that are established in a given location, it is likely to be more appropriate to make the selection on the

basis of the mechanism's non-financial merits rather than just on its cost. These non-financial reasons might be related to e.g. speed of implementation; time savings for the beneficiary; security and the reduced risk of fraud; ease of communication; improved dignity and financial inclusion; or secondary benefits to markets¹.

RECOMMENDATIONS

We therefore make the following recommendations:

Understanding the environment for e-transfers

Agencies considering an e-transfer should explore the state of infrastructure development—electricity, mobile network coverage, mobile phone penetration and ownership, formal banking including branchless banking—and consider whether any challenges can either be overcome at a price or whether they prohibit the use of the technology. A range of statistical data sources, e.g. from the GSM Association, the World Bank and the United Nations, as well as reports by organisations such as NetHope, can provide information on key indicators to assist in this analysis. After narrowing down the options, agencies should then consider the relative capabilities and procedures of individual service providers. Again, there are information sources such as from NetHope and CaLP that can help with making the assessment of their relative merits.

Improving preparedness

- If donors think that e-transfers make for effective delivery of aid, perhaps for reasons unrelated to the cost, it will be necessary for them to think how to get the infrastructure established in areas prone to crisis. This process is likely to benefit from collaboration among stakeholders.
- Disaster preparedness and contingency planning may help to reduce costs of cash transfer programmes (e.g. by bulk purchase of hardware in advance), or at least to move some of the activities and associated costs to a separate occasion (e.g. by carrying out sensitisation and training activities) to reduce the time required to set up programmes when an emergency arises.

Designing and implementing an e-transfer programme

- Consider whether and when the higher set-up costs associated with e-transfers will be offset by the reduction in recurrent costs of distribution. If the payment mechanism seems uneconomical for a single programme, consider the possibilities for other programmes or other agencies to use the mechanism subsequently. One option might be to coordinate with long-term cash transfer programmes to use the same infrastructure.
- Think how the attractiveness of the emergency cash transfer to the payment provider can be improved, since this can greatly reduce the transaction fee. Coordinated approaches to contract negotiation are now taking place in several countries including e.g. the Democratic Republic of Congo and the Philippines.
- Don't assume that 'cheaper' means 'better value for money'. An agency may have to be the first to make an investment in a new technology in order for savings to be made in the long run.
- Cost is unlikely to be the primary reason for selecting one payment mechanism over another since so many programme costs are unrelated to the type of payment mechanism. It may be more appropriate to make the selection on the basis of other criteria such as the flexibility or security benefit for the recipient, or the possibility of using the technology for additional purposes such as monitoring and evaluation.

Improving the evidence on cost-effectiveness

Agencies should be prepared to collect data on programme outcomes if they have a particular requirement to understand their cost-effectiveness rather than only cost-efficiency. However, this may require experimental approaches, using different payment mechanisms to respond to the same situation, which may not always be possible in an emergency. Lessons may be able to be drawn from the pilots undertaken for long-term social cash transfer programmes.

¹ See e.g. Sossouvi (2013) for a more detailed discussion.

PART A: BACKGROUND



Photo: Harry Borden / Oxfam

I INTRODUCTION

I.1 PURPOSE OF THE STUDY

Cash is increasingly offered to households as an alternative to in-kind aid, to improve food security and to meet a variety of essential needs in emergencies. Under certain conditions, particularly when markets are present, accessible and functioning and when cash does not present a security risk, cash transfers are widely recognised to have advantages over other instruments, such as greater acceptability, utility and flexibility for people affected by disasters. They can also potentially lessen the logistical challenge for the implementing agencies.

There is widespread interest in the potential additional benefits that can come from delivering this cash using technology such as mobile phones or electronic bank cards—so-called ‘electronic transfers’ or ‘e-transfers’—rather than by hand. For many years the humanitarian community has acknowledged the possibility of such technologies providing benefits throughout the cycle of humanitarian programming, from enrolling and verifying beneficiaries to distributing payments, maintaining administrative records and assessing programme outcomes. Many examples of the successful use of a range of new technologies have been documented.

Yet a comprehensive review of the use of new technologies in cash transfer programming in 2011 found that, ‘only a handful of initiatives [...] could be said to be using technology “at scale”, and there is only a limited move towards more systematic adoption of these tools’ (Smith et al., 2011). This was the case even though most stakeholders who were then using e-transfers to deliver emergency cash transfers to beneficiaries on a smaller scale had had a positive experience and would use the systems again. The study identified seven barriers to the wider adoption of the technology, of which financial barriers—especially the high investment costs during programme set-up—were one². Some of the financial barriers in relation to the use of the technology for electronic payments (e-payments) are relevant not only for cash transfer programming but also for humanitarian interventions more widely, and even for the use of the new technology in any sphere, be it in the public or private sector. Examples of studies exploring the question of the costs and the factors that contribute to the financial constraints were very limited.

In the light of those findings the Cash Learning Partnership (CaLP) has commissioned this study to find out more about the cost of using e-transfers. The report presents case studies of agencies’ experiences with e-payment and manual delivery systems, identifying how the choice of payment mechanism has affected the programmes’ overall cost-effectiveness.

I.2 THE RESEARCH QUESTION

The central research question is: Are electronic transfers more cost-effective than traditional manual-based cash delivery methods [in the context of emergency cash transfer programming], and under what conditions? The research question requires the team to combine two lines of enquiry:

1. What is the cost to an agency of using its chosen payment mechanism? What are the conditions that lead to this cost?
2. What is the outcome of each programme?

Organisations take many different criteria into consideration when selecting the payment mechanism to be used for disbursing cash, of which cost is just one. Other criteria include the time taken to set up the mechanism; the amount of documentation required from beneficiaries to use the system; the speed, security and reliability of disbursement of cash; the ability to generate quick and accurate reports; and the extent to which the mechanism improves financial inclusion or the cohesion of communities. These other aspects are not the focus of the present research.

² The other six are: (i) Technological constraints e.g. lack of electricity or mobile network coverage; (ii) Institutional barriers e.g. lack of capacity to implement programmes (iii) Operational challenges such as limited time to set up programmes in an emergency (iv) Political sensitivities e.g. about the engagement of private-sector organisations in contributing to humanitarian response; (v) Attitudinal concerns about using the technology; (vi) Legislative restrictions.

1.3 THE CASE STUDIES

The analysis has been conducted by examining the cost and, where possible, the outcome of some current or recent emergency cash transfer programmes in two selected case study countries, Kenya and Somalia (Table 1). A broader review of literature on global experience with e-transfers provides the context for these individual case studies.

Table 1: The case studies

	Country ¹	Date	Agency	Programme name	Payment mechanism	No. of bens.	Objective
1	Kenya	Oct 2009–Mar 2011	Oxfam	Nairobi Urban Livelihoods and Social Protection Programme	Mobile money	c. 2,800	Food security and livelihoods promotion
2	Kenya	Sep 2011–Jun 2012	SOS Children's Villages	Marsabit Emergency Programme	Smart card (voucher + cash)	2,000	Food security
3	Kenya	Sep 2012–Mar 2013	Concern Worldwide	Marsabit County Emergency Response Programme (MRP)	Manual cash	1,000	Food security and livelihoods promotion
4	Somalia	Aug 2011–Jul 2012	Oxfam	Emergency Cash Transfer Programme	Manual cash	12,548	Food security
5	Somalia	May 2012–Aug 2012	Oxfam	E-cash Pilot	Mobile money	2,090	Livelihoods promotion
6	Somalia	Nov 2012–Aug 2013	Concern Worldwide	Conditional Cash	Mobile money	500	Food security
7	Somalia	Mar 2013–May 2013	Concern Worldwide	Unconditional Cash Transfers	Mobile money	905	Food security

Source: OPM. Note: (1) The Oxfam programme in Kenya, plus all four of the Somalia cases, are in urban areas; the programmes run by Concern and SOS Children's Villages in Kenya are in rural areas.

1.4 OUTLINE OF THIS REPORT

The rest of the background sections in Part A give an overview of the framework for the research (section 2), including the scope of the study and the way that costs have been disaggregated; types of e-payment mechanism (section 3); and recent examples worldwide (section 4).

Parts B and C provide the detailed case studies of the cost-efficiency of emergency cash transfer programmes in Kenya and Somalia respectively. Each begins with a summary of the reasons for humanitarian assistance in the country and the state of development of e-payment infrastructure, and then summarises some of the experiences of Oxfam, Concern Worldwide and (in the case of Kenya) SOS Children's Villages Kenya with using e-payment technology. Part D concludes.

2 THE FRAMEWORK FOR THE RESEARCH

2.1 SCOPE AND LIMITATIONS OF THE STUDY

2.1.1 Cost-efficiency vs. cost-effectiveness vs. cost-benefit analysis

The three concepts of cost-efficiency, cost-effectiveness and cost-benefit analysis are closely related:

- *Cost-efficiency analysis* looks at the cost of delivering a transfer of a given size. This produces ratios such as the 'cost-transfer ratio' which tells us how much it costs in administration (direct and indirect operating costs) to deliver every \$100 that reaches the beneficiary.
- *Cost-effectiveness analysis* compares the total programme cost with the magnitude of the outcome, i.e. the extent to which the programme achieves objectives such as a change in household consumption or an improvement in dietary diversity.
- *Cost-benefit analysis* attempts to assign a monetary value to all the positive and negative aspects of a programme, including even abstract concepts such as the value of a sense of security, and to compare the costs (financial costs plus the value of the negative consequences of the programme) with the benefits.

This study provides at least cost-efficiency data for all case studies. This is possible because all participating agencies keep programme accounts. To achieve a comprehensive cost-efficiency analysis we have also estimated hidden costs such as the value of staff time and logistical support.

We have referred to programmes' effectiveness where known. Data on programme outcomes have been collected by agencies during implementation, usually from regular post-distribution monitoring or in a final evaluation. Drawing on these data, where available, we can indicate whether programmes have broadly achieved what they intended. We cannot say whether the outcome would have been different under an alternative payment mechanism, because we analyse programmes that neither are directly comparable nor have control groups. In some cases we cannot specify the outcome of a programme at all. This may be because agencies offer multiple benefits to recipients, e.g. both e-transfers and food vouchers, so we cannot isolate the effect of the e-transfer component; or they team up with others to conduct an evaluation covering several organisations at once, so we cannot know the contribution of the individual agency³.

By agreement with CaLP the report contains no cost-benefit analysis. That would have required large-scale surveys that are considerably beyond the scale of the study, and in any case would be difficult to assess accurately given that many of the programmes finished some time ago.

2.1.2 Comparability of results

We cannot use the findings to judge whether one programme offered better value for money than another, because the programmes themselves are not directly comparable. They have taken place in different countries and locations (urban vs. rural), with widely varying numbers of beneficiaries and responding usually to food insecurity caused by different conditions such as drought, conflict or political instability. Indeed, the ways in which the programme context affects the cost is central to the discussion. However, we do present data for each case study in a similar way, to serve as a starting-point for exploring the reasons for the variation in cost-efficiency.

2.1.3 Costs to agencies, not beneficiaries

The report examines the costs to the agencies and their implementing partners for setting up and delivering transfers through these mechanisms. It was not within the scope of the study to calculate the costs to the beneficiary of participating in the programme, since this would have required separate large-scale surveys which were beyond the scope of the project; and some of the programmes included were ex-post so any data may not have been reliable⁴. However, where information on beneficiary costs is known from evaluation reports we have referred to it.

³ This lack of outcomes data attributable to a specific payment mechanism for a specific agency is why the team could not conduct a full study of cost-effectiveness of e-transfers as had been planned under the terms of reference.

⁴ Beneficiary costs might include eg. the opportunity cost or transportation costs incurred in collecting the transfer.

2.1.4 What counts as an administrative cost

Throughout this report we define all resources used for implementation as ‘administrative costs’: the term covers everything spent under the programme other than the transfer received by the beneficiary. It includes the costs of the time of field staff, managers and administrators, transport, security arrangements, printing, the purchase of phones or bank cards for the beneficiaries, report-writing etc. It therefore covers expenditure that NGOs may refer to as direct and indirect programme costs, operating costs, management costs or support costs. It should not be confused with the narrower concept of ‘overheads’ being only non-project costs.

2.2 THE ANALYTICAL FRAMEWORK: HOW TO MEASURE COST

Agencies that run emergency cash transfer programmes typically record their expenditure by date and by line item (salaries, equipment, transport etc.), in accordance with usual accounting procedure. This enables us to find out how much was spent, by whom and on what.

A different way of disaggregating expenditure is to classify the activities on which it was spent. This is useful because we can see which costs were for one-off activities that will not be repeated, such as design and set-up costs, and which are for the recurrent distribution of cash. This distinction is important for understanding how the cost of a programme will change over time.

But how to define ‘one-off’? Some activities are only ever done once, such as designing the programme. Others do not recur unless a programme expands to new locations (such as costs associated with introducing the programme to local community leaders or community-level training). Yet others are done once for a given set of beneficiaries, but would be repeated if new beneficiaries were subsequently enrolled even if in the same locations (such as giving beneficiaries a phone or a bank card). We have therefore created a series of levels of ‘one-off’ activities.

Recurrent costs are more easily defined, being the activities that take place each time a transfer is made.

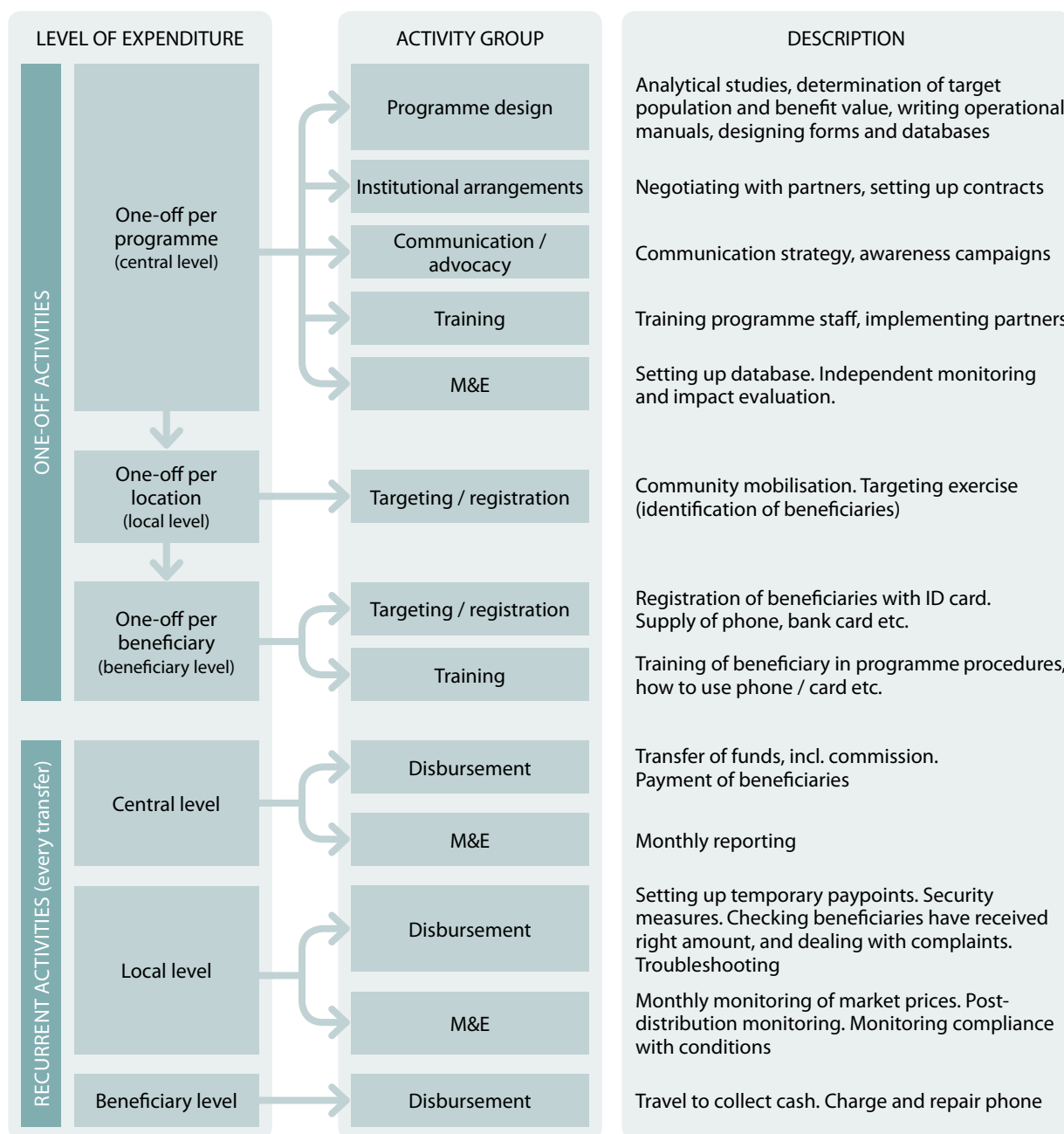
Activities have been grouped under seven headings. Activities under these headings can variously be one-off or recurrent:

1. Programme design
2. Institutional arrangements
3. Communication / advocacy
4. Training
5. Targeting / registration
6. Disbursement
7. Monitoring and evaluation (M&E).

Since costs are not presented in accounting records in this way we derived this disaggregation in collaboration with programme and finance staff, thus attributing salary and non-salary costs to various programme activities. This included estimating what proportion of time staff members spent on different tasks, and what resources they needed to achieve them. The different levels of expenditure, with a description of activities for a typical programme, are presented in Figure 1⁵.

⁵ This is a refinement of the typology of costs that OPM developed for assessing the costs of long-term cash transfer programmes in Kenya in 2009 and in Kazakhstan in 2011, and that is highlighted in White *et al.* (2013).

Figure 1: A scheme for measuring cost by activity



Source: OPM. Note: This is an example of how activities—and therefore costs—might be distributed. Each programme will have its own variants.

3 OUTLINE OF E-PAYMENT MECHANISMS

CaLP's guidelines to support implementation of electronic cash transfer (e-transfer) programmes, and its 2011 study of new technologies in cash transfer programming, identify three broad types of e-payment mechanism for delivering cash transfers (Smith *et al.*, 2011; Sossouvi, 2013):

- Card-based systems
- Mobile phone-based systems
- Electronic vouchers that are not tied to any particular type of hardware.

Agencies have been collaborating on research to advance the use of these mechanisms. The Better than Cash Alliance was launched in September 2012 by a group of private and not-for-profit organisations and aid agencies, to advocate for and speed up the adoption of e-payment mechanisms in many areas from government salaries to development assistance. Within the humanitarian sector, the United States Agency for International Development (USAID) has been working with NetHope, a group of over 30 non-governmental organisations (NGOs), since 2010 to incentivise its partners to incorporate e-payments into their operations to improve efficiency.

3.1 CARD-BASED SYSTEMS

Card-based systems use a card with a magnetic stripe, or a smart card that has either a chip-and-pin system or else 'contactless' technology that communicates via radio waves⁶. A beneficiary's experience of a card-based cash transfer programme may depend on the type that the programme uses. A magnetic stripe card is linked to an account, which might be a regular bank account; the beneficiary can make payments or withdraw money only when there is a live network connection between the merchant and the organisation that holds the account. In contrast a smart card does not have to be connected to a separate account (though it may be): the funds can be stored entirely on the card itself, as is the case with the sQuid card reviewed in section 7 below. Nor does there have to be a live network connection at the moment of use. In cases where the value is stored on the smart card itself it is enough to have a network connection at the time when the value is loaded onto the card. When the recipient uses the smart card, such as in a shop, the merchant can store information about transactions on a local point-of-sale (POS) device and upload the data later when a network connection is available. The card's embedded chip holds the information on the beneficiary and the value of the benefit that they have received. This means that smart cards can be used even in less urbanised regions, where infrastructure is less developed.

Both magnetic stripe and smart card technology require merchants to have a POS device that can read the card when cardholders wish to redeem their e-transfer either to pay for goods or receive as cash. They often use a 'four-party' operating system which means that the POS device does not have to be for the exclusive use of the provider that runs the account and issues the card: instead a network such as Visa can process the payment, acting as an intermediary between the two⁷.

An advantage of a card-based payment system is the potential of linking beneficiaries to more formal financial institutions, giving them the ability to access credit and other financial services. Limitations are that, depending on the financial services regulations in country, they may have stringent 'know-your-customer' requirements, or policies requiring the card issuer to vet the identity of the beneficiary before giving out the card; they require POS devices to be distributed widely, eg. in stores, so that cardholders can use them; and that, unlike with mobile money (discussed below), payments cannot be transferred directly from one private individual to another (USAID, 2012).

⁶ See also e.g. Smith *et al.* (2011) and USAID (2012) for further discussion of types of card.

⁷ The 'four parties' here are the customer, the merchant, the card issuer and the organisation that issues the POS device.

3.2 MOBILE PHONE-BASED SYSTEMS

Mobile phones can be used to deliver cash transfers through either a basic 'mobile token' system or a more sophisticated 'mobile voucher' or 'mobile money' system (Sossouvi, 2013).

Mobile tokens allow beneficiaries to withdraw cash, but not to make payments. Under this system the beneficiary uses the mobile phone for little more than receiving a text message with an authorisation code. They take this code to a recognised 'cash-out' agent, such as a shopkeeper or bureau of a participating money transfer company, who pays the beneficiary the entire value of the transfer in cash in a single disbursement: residual money cannot be stored. The mobile phone company then repays the agent using the funds they have received from the implementing NGO. This type of payment system is not discussed further in this report because we consider that the phone is being used as a means of communication rather than as an e-payment mechanism.

Mobile vouchers can be used for payments, such as to buy food from participating stores, and also have the potential to be used to withdraw cash. They are electronic substitutes for paper vouchers. Beneficiaries do not have to spend all the money at once. The beneficiary gives the merchant a voucher number and verifies the transaction with a PIN. Again, the merchant redeems the value of the voucher from the mobile network operator who is paid by the NGO. Unlike with the bank card, this means that the agency that issues the voucher has to have a direct relationship with both the beneficiary and the merchant, such as through a register of authorised merchants. It is the trader, not the beneficiary, who has the phone.

Mobile money systems offer the most sophisticated range of payment options among all systems that use mobile phones. The user can generally either withdraw cash, transfer funds directly from their own 'mobile wallet' or account to another individual, pay bills or pay for goods with registered merchants, or buy credit for phone calls. These are generally national-level systems set up by mobile network operators unconnected with humanitarian programmes. The most established and well-known of these systems is the M-Pesa in Kenya. In terms of regulation, there is no standard when it comes to issues such as whether mobile network providers are allowed to store mobile money on behalf of their customers. However, while this is allowed in Kenya the majority of regulations in countries require network operators to partner with a commercial bank (Gray, 2006).

When used in cash transfer programming, the implementing agency typically opens a bulk payment account with the mobile network operator and opens individual mobile money accounts for each beneficiary. The agency then provides the mobile network operator with a list of beneficiaries whose mobile accounts are to be credited. This is often in the form of a unique identifier, phone number and amount to be transferred. The beneficiary is notified of the credit via SMS and the corresponding funds are debited from the agency's mobile money account.

Mobile network operators are seen as being much more experienced than banks when it comes to building and managing large, low-cost distribution networks in unserved areas. They usually have a larger customer base and a greater number of agents in towns and villages. However, the fact that they are not banks or financial institutions means that they are less likely to offer associated financial services that increase the level of financial inclusion.

3.3 ELECTRONIC VOUCHERS

Electronic vouchers are the same as mobile vouchers except that the merchant authenticates the transaction over the internet rather than through the phone network (Sossouvi, 2013). The beneficiary does not need a phone as they can receive the voucher number on paper.

4 RECENT GLOBAL EXPERIENCE WITH E-TRANSFERS

We summarise here some of the developments in the take-up of e-payment technology by the humanitarian sector over the last two years. This updates CaLP's 2011 study on new technologies in cash transfer programming, at which time e-payment mechanisms were becoming increasingly common for long-term social assistance but were systematically being used for emergency relief only in a few places such as urban Kenya⁸. Where it is known, we note whether cost has been a factor in decision-making on the use of the technology. The focus is on smart card- and mobile money systems, for which information is more widely available. For ease of reference a table of relevant programmes is presented in Annex A.

4.1 CARD-BASED SYSTEMS

Many of the emergency relief programmes we found using card-based payment technology are in Asia, Latin America and the Middle East (e.g. Pakistan, the Philippines, Ecuador, Lebanon). In these areas the banking infrastructure is generally better developed than in Africa; and many of the cash transfers have been issued in urban locations. The successful use of this technology requires either established infrastructure, or a willingness on the behalf of the implementing agency and its private-sector partner to expand the 'branchless banking' network, i.e. the channels such as cash machines (ATMs) and POS devices in shops by which cardholders can use financial services through retail agents without having to go to a physical bank branch. Setting up these branchless banking channels requires prior investment in communication and power infrastructure—such as electricity, telephone lines or mobile networks—which are more usually the responsibility of government or at least require government to facilitate the involvement of the private sector.

In Africa, where the banking infrastructure is poorer, the possibility of using bank-derived card-based technology for humanitarian relief depends on programmes operating either in areas with the required connectivity and branchless banking channels, which will generally be urban areas, or on agencies investing in their own 'closed-loop' card system where they set up the infrastructure themselves, issuing their own cards and purchasing POS devices, rather than using the four-party system outlined in section 3.1 above. This infrastructure constraint therefore either imposes a geographical restriction on the programme or else greatly increases the cost. SOS Children's Villages Kenya used a card-based system for an emergency cash transfer programme and this is one of the case studies in Part B. In that instance, infrastructure constraints meant that rather than setting up the programme in the villages, closer to beneficiaries, the system had to be situated in a town centre where there was sufficient signal strength.

Some other examples of where card-based systems have been used for emergency relief in the last two years include:

- Support to flood-affected households in Pakistan. The Government of Pakistan gave an unconditional cash transfer of about \$225 to over 1 million households affected by the floods in Pakistan in 2010 under the Citizens' Damage Compensation Programme, which used a Visa card, the Watan card, delivered in partnership with United Bank Limited.
- Emergency relief in the Philippines. In the Philippines in 2011 Action Contre la Faim (ACF) piloted the use of magnetic stripe cards to provide about \$45 each to 300 people affected by flooding, its first experiment with the technology worldwide. The cards were programmed for use only with POS devices in stores rather than at ATMs, to reduce the time spent on training beneficiaries unfamiliar with using ATMs, since time was a critical factor. Subsequently, following a tropical storm in 2012, ACF gave a one-time grant of nearly \$20 to over 2,000 households also using a pre-paid magnetic stripe card, this being the predominant card type used in the Philippines. ACF estimates that its first pilot cost a similar amount to a paper voucher scheme; in the second, it invested more time in training and in compliance with the know-your-customer requirements, which added to the indirect costs but meant that the programme was able to run more smoothly (pers. comm., 2013).

⁸ In a review of long-term government-run social assistance programmes launched between 1999 and 2009, just under half (18 out of 40) were found to use an e-payment mechanism (Pickens *et al.*, 2009).

- Programmes to support Syrian refugees. In Lebanon Save the Children, in partnership with CSC Bank, began providing cash transfers via a magnetic stripe card to over 1,000 refugee households and host families in April 2013 (Pelly, pers. comm., 2013). This followed a comprehensive assessment by the International Rescue Committee (IRC) in Lebanon of different payment modalities including cheques, vouchers, money transfer agents, and one-use or reloadable bank cards (International Rescue Committee, 2012a)]. The study found in favour of bank cards because of the widespread availability of ATMs, the absence of a mobile money service and the prohibitive administrative, regulatory, and fee requirements of money transfer agents.

An assessment for a proposed cash transfer to Syrian refugees in Jordan in 2012, also by the IRC, similarly advocated the use of bank cards given the widespread availability of ATMs and the familiarity of many families with using them. Mobile money services exist in Jordan but were not considered suitable because of the requirements for formal identity documents and the obligation to open a post-paid phone account (International Rescue Committee, 2012b).

- World Food Programme support to poor households, including refugees. The World Food Programme has now used card-based systems in a number of countries. For instance, in Ecuador in 2010 it supported poor Ecuadorians and Colombian refugees with a cash transfer of \$40 delivered via a bank card (Hidrobo et al., 2012). Beneficiaries were able to withdraw the cash from an ATM at any time. The pilot was undertaken in two provinces with good access to ATMs and functioning markets.

4.2 MOBILE PHONE-BASED SYSTEMS

The rapid growth in mobile phone ownership and signal coverage has increased the potential for using mobile-phone-based payment systems for emergency cash transfer programming in many regions around the world. In Africa, while banking infrastructure remains a challenge, mobile networks have developed at a faster pace, often with the aid of enabling government policies. Governments such as those in South Africa, Kenya and Uganda obliged mobile network operators to provide a certain minimum level of network coverage and to ensure network expansion to remote areas as part of their licensing terms (Gray, 2006).

Mobile money systems have been developed not only in Africa, such as in our case study countries of Kenya and Somalia, but also in some countries of Asia and Latin America (Aker, 2011). Some recent examples of where mobile money transfers have been tested, to varying degrees of success, include the following:

- Food security programmes. Concern Worldwide piloted a mobile money transfer for 743 households in Malawi in 2012 in response to the food crisis that affected the southern and central regions that year. The participants were each given a transfer of MK 12,000 (about \$72) using Airtel Money (Oxfam, 2013a). This payment mechanism was dropped after one month owing to a number of challenges including insufficient liquidity on the part of the service provider's local agents. The mobile money system in Malawi is at an early stage of development and beneficiaries generally withdraw all e-transfers in cash, so liquidity is crucial. The World Food Programme was also trialling the Airtel Money system using the same emergency response, and it was difficult for Airtel to respond to both programmes simultaneously. Other agencies including Oxfam, Goal Malawi and Circle for Integrated Community Development used manual delivery of transfers for their response. In 2013 the consortium is revisiting the mobile money option, now that the system is better established in the country. It is hoped that if agencies can coordinate their approach to the service provider this will give Airtel a better understanding of the total liquidity requirements in the programme zone.

BOX 1: CONCERN WORLDWIDE'S EXPERIENCES WITH MOBILE MONEY IN NIGER



In response to the Sahelian drought in 2010 Concern Worldwide piloted a mobile-money cash transfer programme for some 4,000 food-insecure households in Niger, the first use of this technology for emergency cash transfers in Francophone Africa. Five monthly transfers were distributed using Airtel Money in rural locations of Tahoua District. Airtel was still in the process of establishing its network of permanent distribution outlets so provided a temporary 'roving agent' who provided 'cash-out' services to beneficiary communities on particular days of the month. Beneficiaries redeemed all of the e-transfer value in cash, rather than being able to use it to make e-payments to traders for goods, so the disbursement method was similar to a manual payment.

An evaluation compared the mobile money system to a 'control' group of households who were provided cash transfers manually, in envelopes by Concern (Aker *et al.*, 2011). It concluded that the mobile money delivery mechanism strongly reduced the variable distribution costs for Concern, as well as beneficiaries' costs of obtaining the cash transfer. In the case of this latter benefit this is because Airtel had sent its roving agent to every village (mirroring the level of service one would expect if the distribution outlets were established) while Concern's manual distribution took place in a central village to cover several surrounding locations, again mirroring standard practice for a manual distribution. The mobile delivery approach also resulted in additional benefits: households used their cash transfer to purchase a more diverse set of goods, had higher diet diversity, depleted fewer assets and grew more types of crops than households who received their transfer manually. The researchers posited that the potential mechanisms underlying these results were the lower time costs and greater privacy of receiving the cash transfer via the mobile money mechanism. They concluded that mobile money transfers could be a cost-effective means of providing cash transfers for remote rural populations, especially those with limited road and financial infrastructure.

On this basis Concern switched to using 100% mobile money across Tahoua District during the drought response in 2011. However, by 2012, it had reverted to using manual delivery mechanisms there. One of the main reasons was that, two years on, Airtel still did not have distribution outlets in all villages where beneficiaries were located, and thus effectively a manual distribution would take place at the temporary cash-out point each month. It was still not possible for people to collect money as needed from an agent that was permanently located in the village or to use the service effectively to pay for goods and services. Until the service could become more permanent in the area, the cost of providing phones and training beneficiaries was prohibitive.

Concern is now working with the provider on their long-term cash transfer programme in these districts. The programme is training some of the poorest beneficiaries to become agents for Airtel, providing an income stream to these households whilst supporting the expansion of the distribution network.

- Post-earthquake support in Haiti. CaLP's 2011 report noted the widespread use of mobile money by NGOs providing cash transfers in Haiti following the earthquake of 2010 (Smith *et al.*, 2011). By the start of 2012 six aid agencies were already using a mobile money platform to deliver aid to beneficiaries, though independently of one another rather than as a consortium. Others were using mobile vouchers. A comparative analysis was undertaken in 2012 of the costs of using the mobile money service versus the manual distribution of cash in envelopes (Dalberg, 2012). This found that when the technology was first used, for a programme of nine payment cycles, the mobile money service was about 35% more expensive than the manual programme (\$9.70 per beneficiary per cycle compared with \$7.20) owing to the one-off costs required to hire consultants to develop the programme and to build institutional knowledge. Additional costs were incurred because the technology itself was new in Haiti, so in some cases the NGOs were also investing in training merchants and agents in how to use mobile money. It was estimated that if the technology were used for a subsequent programme then the costs of mobile money would reduce by about one-third, to \$6.50 per beneficiary per cycle, making it slightly cheaper than the manual version.

- Post-conflict recovery. The World Food Programme and ACF, in partnership with the mobile network operator MTN, provided a cash transfer using MTN's mobile money platform to 10,800 beneficiaries in Abidjan, the main city of Cote d'Ivoire, following the post-election violence of 2011 (Truelove and Watson, 2012). Beneficiaries received 66,000 CFA (about \$132) spread over two instalments, representing two months' worth of a basic basket of food for a family of five; a third instalment of 18,000 CFA was added using remaining programme funds. The mobile money mechanism was selected because most beneficiaries had mobile phones—though none had used the mobile money service—and because mobile money accounts could be set up swiftly without a requirement for beneficiaries to have national identity cards, unlike bank accounts or transfers through money-transfer agents. The programme's final evaluation report notes a number of benefits of using mobile money, such as speed of payment and flexibility of use, and also challenges such as defective SIM cards (Truelove and Watson, 2012). It notes that the payment mechanism was deemed by the implementers to be the most cost-effective but that costs might have been reduced by issuing a single transfer instead of two separate instalments a month apart.

Examples of programmes that use mobile tokens, rather than mobile money, include the following:

- In 2012 the World Food Programme provided humanitarian relief during the lean season for over 11,000 households in three urban areas of Niger: Tillabery, Tahoua and Agadez. The cash—a monthly sum of 32,500 CFA per household, the value of the food basket for an average size family—was distributed using a mobile token which beneficiaries had to cash out at an agent of the mobile network operator, Orange. The token system was used because mobile money was not available. The agency experienced difficulties with network coverage even in urban areas and stopped the mobile token in one location after one transfer owing to poor connectivity.
- The World Food Programme piloted a similar programme using mobile tokens in Mali in 2012, giving around \$50 each to over 16,000 beneficiaries in partnership with Orange Mali (Andriamarolaza, pers. comm., July 2013)⁹. The mobile phone pilots ran for four months before the partners decided to terminate the arrangement. Given the context, the partnership with Orange worked relatively well; but Orange faced logistical and liquidity challenges with operating mobile payment units and there were some instances where beneficiaries walked distances of up to 60km to reach pay points. The World Food Programme turned to microfinance businesses with a presence in the two locations because these businesses had the networks to set up delivery sites close to beneficiaries, at a much lower cost.

Kenya and Somalia have among the world's most sophisticated and widely used mobile-money systems. For this reason the payment mechanism has been tried by a number of humanitarian agencies in those countries, particularly in urban areas. Their experiences are explored in depth in the case studies in Parts B and C that follow.

⁹ See also www.wfp.org/node/3516/3900/259379.

PART B: ELECTRONIC AND MANUAL CASH TRANSFERS: LESSONS FROM KENYA



Source: UN cartographic section. Note: map shows the province boundaries prior to the reorganisation of Kenya's administrative divisions.

5 CONTEXT OF KENYA

5.1 THE NEED FOR HUMANITARIAN ASSISTANCE

Kenya is naturally susceptible to climate hazards that, when combined with socioeconomic conditions such as the heavy reliance on nomadic pastoralism in the arid and semi-arid lands (ASALs) of the northeast and rapidly increasing urbanisation elsewhere, render a significant proportion of its 40-million population vulnerable to the consequences of shocks such as droughts and floods¹⁰. Moderate droughts or floods are estimated to occur every three or four years, while more severe droughts occur about every 10 years (Parry et al., 2012). In rural settings, such disasters directly affect livelihoods while for urban citizens food shortages typically result in increases in food prices that leave many vulnerable and in need of assistance.

The country has experienced two periods in recent history (2009–10 and 2011–12) when severe droughts and food shortages left an unprecedented number of people in dire need of food relief. In 2009–10 the number of people affected by inadequate rains was estimated to be in the region of 9 million, of whom close to 4 million were pastoralists and agro-pastoralists in urgent need of humanitarian assistance, a further 2 million were the rural poor and about 2.5 million were the urban poor affected by escalating food prices (Kenya Food Security Steering Group, 2009)¹¹.

In 2011 the whole Horn of Africa region experienced what has been called its worst drought in 60 years (World Food Programme, 2011). The Government of Kenya declared the drought a national disaster in May 2011 at the time when a mid-season assessment conducted by the Kenya Food Security Steering Group estimated that 3.2 million people required urgent assistance. By August 2011 that number had increased to 3.75 million, from among more than 13 million people thought to be affected across the Horn of Africa (including in Somalia, discussed in Part C below).

The Kenyan cases presented in this report are drawn from the responses to these two crises.

5.1.1 The humanitarian response to the droughts

Urban and rural contexts require different humanitarian responses to address climate shocks and to mitigate risk. Generally, humanitarian assistance in rural ASAL regions has combined direct food assistance, through cash transfers or food vouchers, with livelihoods development to help improve pastoralists' ability to cope with shocks. Such interventions include support for livestock and infrastructure development focused on improving access to water. The challenges of delivering cash or food to nomadic pastoralists in these areas are compounded by the security problems along Kenya's border, especially with Somalia, as well as by practical obstacles such as a low level of identity document ownership. Poor banking and communications infrastructure limit the options available to humanitarian agencies to deliver cash or vouchers.

In urban informal settlements humanitarian agencies responded to the food price increases following the 2009–10 and 2011–12 droughts by delivering cash transfers alongside support for income-generating projects. Here the options for delivering cash to beneficiaries have been wider, particularly because of the accessibility of the mobile money service, M-Pesa, in urban areas. Many interventions have started using the service to deliver cash to beneficiaries; some are included in the case studies that follow.

¹⁰ About 5.5 million people, mostly pastoralists, are estimated to live in the ASAL regions of northern Kenya and to be vulnerable to drought. The population living in informal urban settlements in Kenya is estimated to have increased from 2 million to 5 million between 1990 and 2011 (ECHO, 2013; UN Habitat, 2013).

¹¹ Other government estimates put the number of people affected in urban areas, especially in informal settlements in Nairobi, at up to 4.1 million (MacAuslan and Phelps, 2012).

5.2 BANKING AND COMMUNICATIONS INFRASTRUCTURE

5.2.1 Banking

In recent years Kenya has experienced a significant expansion in its banking infrastructure, first in urban and subsequently in rural areas. Between 2006 and 2008 alone the number of bank branches in the country increased by nearly 50%, from 581 to 849 (FSD Kenya, 2007 and 2009). The branches were located predominantly in urban centres, especially Nairobi, which had some 353 branches as of 2008, though not a single one was in its largest informal urban settlement, Kibera (FSD Kenya, 2009; UN Habitat, 2013).

That expansion phase completely missed the sparsely populated ASALs, leaving the region largely unbanked. However, since 2009 the banking sector has extended also into rural locations. In the predominantly rural former Eastern province, which includes Marsabit county from where two of our case studies are drawn, the proportion of adults using banks has doubled from around 13% in 2009 to 26% in 2013 (FSD Kenya, 2013). This is still half the level of bank use in Nairobi, where 52% of adults in 2013 reported using banks. The growth in the proportion of adults using banks has been aided by the establishment of branchless banking channels. Nonetheless, both bank agents and branches remain inaccessible to many people in rural areas: according to the latest FinAccess Survey some 55% of the rural population, and only 14% of the urban population, would need to travel for more than half an hour to reach their nearest bank branch; and the average cost of transport to reach the nearest branch is higher for the rural population (FSD Kenya, 2013).

5.2.2 Mobile network coverage

Kenya is one of the developing countries with the highest mobile network coverage. Some 95% of its population live in an area that is covered by a mobile network signal. The market has four mobile network operators. Of these, Safaricom is significantly ahead of the rest in terms of market share, with 64% of the market; Airtel has 16%, Orange 11% and Yu 9% (GSMA, 2012). The country has a mobile penetration rate—the ratio of mobile phone subscribers to the population—of about 66% which, while high, is still much lower than that for developed countries. The rapid development of this infrastructure has far outpaced that of other infrastructure such as electricity: some 84% of households in the country are estimated to be unconnected to formal grid electricity.

However, there remain differences in coverage between rural and urban areas. Even Safaricom covers northern regions like Marsabit quite sparsely. Technical problems such as poor signal strength are worsened by poor maintenance of the network antennae.

5.2.3 Mobile money

Access to formal financial services in Kenya was transformed by Safaricom's launch of its mobile money service, M-Pesa, in March 2007. Since then it has become the most famous and probably the most successful mobile money service to date. By late 2008 M-Pesa in Kenya had over 2.7 million registered customers and more than 3,000 agents; a year later this had risen to 7 million customers and 10,000 agents across the country. The latest estimate puts the number of M-Pesa users at 16 million with an extensive rural reach (Deloitte, 2012). This rapid expansion meant that the penetration rate of mobile money soon exceeded that for any other financial service in Kenya. While banks improved their market penetration from 12% to 20% between 2006 and 2009, M-Pesa already had a 26% penetration rate by 2009 (FSD Kenya, 2011). According to the same data, as M-Pesa gained steam, there was an exponential increase in the proportion of the population remitting money nationally, from 17% in 2006 to 52% in 2009.

M-Pesa is no longer the only mobile money service in Kenya, though it retains by far the largest market share with some 81% of all mobile money subscribers. The other three mobile operators have also followed in Safaricom's footsteps albeit at a smaller scale. Airtel's service, 'Airtel Money', was launched in November 2010 as Zain Zap and relaunched in August 2011. It is the second largest provider with about 15% of all mobile money subscribers. Other mobile money services are Orange Money, with a 1% market share, and Essar's yuCash covering the remaining 3%.

Mobile money's popularity is due largely to its usability for numerous day-to-day transactions such as paying individuals, purchasing groceries or paying utility bills. Other popular uses now include accessing loans and making insurance contributions. However, the use of the technology is not without challenges. Network coverage can be patchy; mobile payment agents may not have adequate liquidity; and there is a lack of interoperability among mobile money systems (account-holders cannot pay someone whose account is with a different service provider, or use the agent of another service provider for 'cash-in' and 'cash-out' services). Furthermore, the absence of electricity can make it difficult to charge the phones, although the use of solar-powered charges helps to resolve this at a small additional cost.

Mobile money has gained prominence in the humanitarian sector as a method of delivering cash in urban areas as well as in rural regions with sufficient network coverage. Concern Worldwide was the first to pilot its use for emergency cash transfer programmes in Kenya (Smith *et al.*, 2011). In the 2008 post-election violence period, Concern and Safaricom partnered to distribute cash to 500 households in the rural Kerio Valley. Other agencies such as Oxfam have also delivered cash using M-Pesa in urban contexts while some like Télécoms sans Frontières (TSF) and Vétérinaires sans Frontières-Germany (VSF-G) have used M-Pesa to deliver cash in parts of some rural counties (Hermon-Duc, 2012). Challenges remain for aid agencies in that in remote areas beneficiaries generally do not have mobile phones, so they need to be provided with a handset and to be trained in its use.

The next section presents three case studies where cash was delivered in urban informal settlements as well as in the northern pastoral region of Marsabit. Each case study presents a programme where either mobile money, smart cards or manual payment through local agents were the payment mechanism employed. For these cases, the implementing agency tried to select the most appropriate payment mechanism for the programme's context and the level of development of banking and communication infrastructure were key determinants.

6 CASE STUDY I: OXFAM'S EMERGENCY CASH TRANSFER THROUGH M-PESA IN NAIROBI

6.1 THE URBAN LIVELIHOODS AND SOCIAL PROTECTION PROGRAMME

6.1.1 Programme objectives and context

Oxfam and Concern Worldwide developed a joint programme to address the food crises of 2009–10 in two informal urban settlements of Nairobi, namely Korogocho and Mukuru. The programme aimed to improve access to food in the short term via cash transfers and to provide further income opportunities and improve livelihoods in the longer term; it distributed cash rather than food because food was readily available at local markets. The programme also sought to show that cash could be safely and effectively distributed to poor people in urban areas using mobile phone technology.

The programme provided cash transfers to nearly 5,500 households. Oxfam, the lead agency in the consortium, assisted a total of nearly 2,800 separate households in Mukuru while Concern Worldwide supported about 2,700 in Korogocho. There was a particular emphasis on targeting women, who comprised some 86% of recipients in Korogocho and 98% in Mukuru; most were household heads with no male support. Although initially scheduled to run for just six months, Oxfam's component ran for 18 months from October 2009 to March 2011 while Concern provided transfers until January 2011. Households were assisted for varying lengths of time: Oxfam consistently made payments to around 2,600 households a month for much of the first year, reducing to about 1,100 households in the final half-year of the programme. Some of the later beneficiaries were newly enrolled following the exit of some of the original beneficiary households.

The value of the benefit was pegged at KES 1,500 (\$19) a month. This was set at the urban food poverty line for a five-person household, in line with the Government of Kenya's social assistance payments¹². The cash transfer was paid monthly through Safaricom's M-Pesa mobile money system. This was considered by Oxfam to be a natural choice given that in the programme area traditional banking mechanisms such as ATMs were not easily accessible.

This case study analyses the cost of cash transfers delivered by Oxfam in Mukuru, not the component of the programme run by Concern in Korogocho.



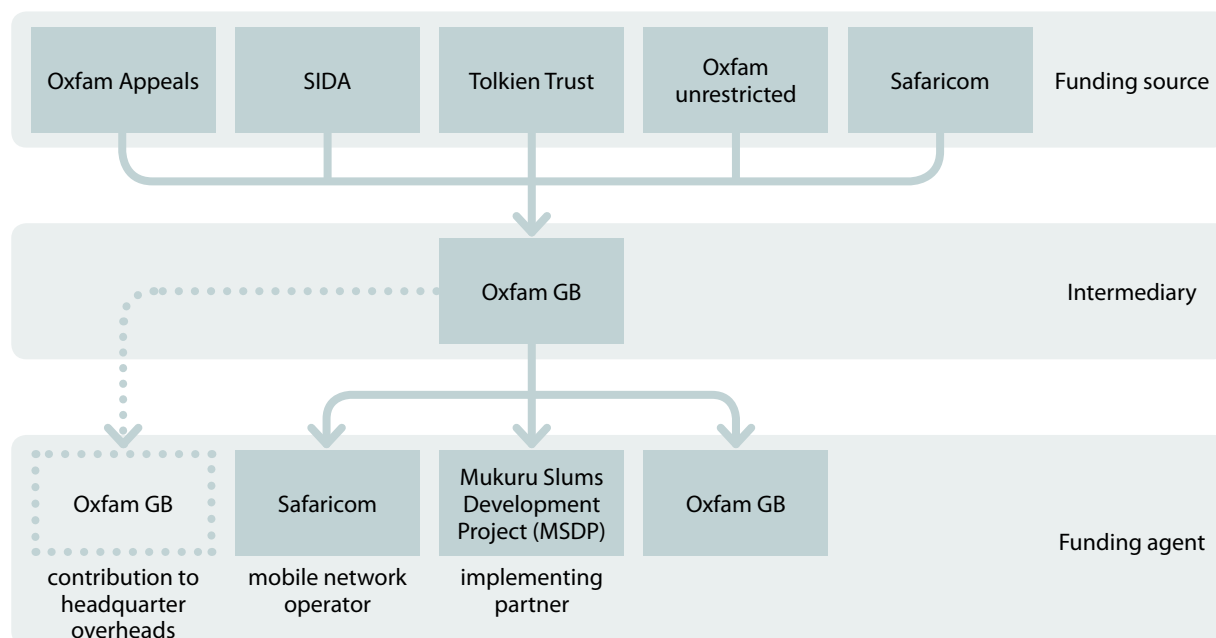
Photo: Oxfam

¹² Actual household size in Mukuru ranged between two and 17, with 50% having between five and nine members.

6.1.2 Institutional arrangements

The programme was funded by donations from various sources: the Swedish International Development Cooperation Agency (SIDA), the Tolkien Trust and Safaricom, as well as by Oxfam itself through its Oxfam Appeals and unrestricted funding (Figure 2).

Figure 2: Flow of funds for Oxfam's programme in Mukuru



Source: OPM, from discussion with Oxfam.

The money from SIDA was designated for both direct transfers and administration expenses incurred during the first stages of the programme. Subsequently, a second and third phase of direct transfers to beneficiaries were funded by Tolkien Trust and Oxfam Appeals (Figure 3).

Figure 3: Funders of Oxfam's direct cash transfers in Mukuru, by date

	2009	2010	2011
SIDA	Phase 1: Oct 2009–Mar 2010		
Tolkien Trust		Phase 2: Mar–Aug 2010	
Oxfam Appeals			Phase 3: Aug 2010–Mar 2011

Source: Oxfam.

Safaricom, as well as being a technical partner, funded some of Oxfam's administrative costs (\$108,000, or 31% of the eventual total) throughout the programme as they anticipated that the programme would grow into a bigger, broader social protection intervention which would be scaled up with the support of government. The donation allowed them to meet their corporate social responsibility.

The funds received were shared between Oxfam itself as the lead agency; the Mukuru Slums Development Project (MSDP), the local implementing partner; and Safaricom for the registration of beneficiaries and transaction fees. Oxfam also paid a fixed percentage of the costs to its headquarters in the UK as a contribution towards their overhead expenses.

6.1.3 How the programme was implemented

As the lead organisation, Oxfam carried out a lot of activities on behalf of the consortium prior to the programme's commencement. In 2008 Oxfam had already decided to plan for a programme covering urban slums. From September 2008 until January 2009 they spent their own resources to prepare for such a programme and carried out studies to understand the urban context better. When the humanitarian crisis hit, they formed a consortium with Concern Worldwide, in accordance with earlier discussions between the two organisations, and started raising awareness with the aim of getting enough funding to start the programme. Once funding had been secured, Oxfam in partnership with MSDP carried out more of what we have termed one-off activities at central, local and beneficiary level. These included designing the programme, negotiating contracts, training the implementing partners, setting up a database, and enrolling beneficiaries. Most of the local level activities were carried out by MSDP, a local NGO in Mukuru.

Each monthly payment entailed a number of recurrent activities such as the transfer of value to Safaricom, monitoring of the processes to ensure that beneficiaries had received the right amounts and carrying out account reconciliations. Oxfam uploaded the monthly list of recipients onto the M-Pesa database and validated payment, upon which beneficiaries would receive an SMS confirming the value credited to their account.

6.1.4 The outcomes of the programme

The impacts of Oxfam's cash transfer and livelihoods activities in Mukuru have been analysed qualitatively by MacAuslan and Phelps (2012)¹³. Their analysis shows that, for a typical family of five, the transfer might be sufficient to cover the gap between regular incomes and minimum basic expenditure on food and water, rent and schooling; for larger families it reduces the gap but might not be enough to cover basic spending needs. The programme's main impact was on food security: the rate of beneficiaries reporting being severely food insecure reduced from 97% to 9% during the project¹⁴. There were small improvements in dietary diversity, though most of the transfer was spent on items that already formed the basis of the meal and average dietary diversity was assessed to remain below healthy norms. The transfer is reported to have saved lives of HIV+ individuals by enabling them to eat regularly enough to take their antiretroviral drugs. It helped beneficiaries to reduce (though not always avoid) the use of negative coping strategies such as prostitution, crime, and removing children from school. The cash transfers also helped recipients pay off debt and some even start or restarted businesses that generated additional income.

The evaluation does not report that the choice of M-Pesa as a payment mechanism influenced these outcomes. However, it does note that the outcomes of the programme might have been enhanced if nutritional or health messages had been sent to the beneficiary's phone along with the cash transfer (MacAuslan and Phelps, 2012).

6.2 THE COST OF THE PROGRAMME IN MUKURU

6.2.1 Total administrative cost

Oxfam's programme delivered \$565,000 of transfers to beneficiaries at an administrative cost of \$362,000, giving a total programme expenditure of \$927,000. Key cost ratios are therefore:

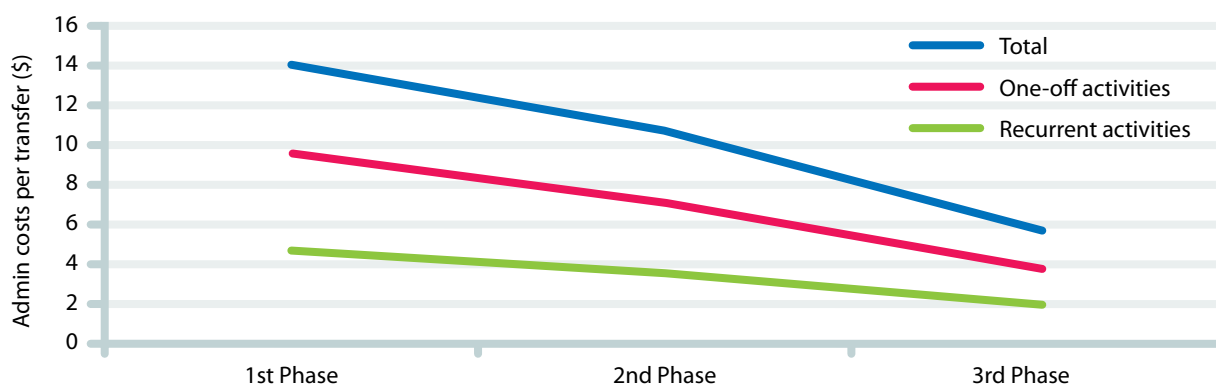
Cost-transfer ratio	=	$\$362\,000 / \$565\,000$	=	0.64
Admin costs as % of total budget	=	$\$362\,000 / \$927\,000$	=	39%

The cost-transfer ratio means that it cost \$64 in administration to deliver every \$100 to the beneficiary. Because the transfer value was \$19 the average cost of administering each transfer over the life of the project was therefore \$12 ($19/100 \times \64). However, this average obscures the reduction in the ratio of administrative costs to transfer by phase from around \$14 per transfer in the first phase (cost-transfer ratio = 0.76) to only around \$6 per transfer in the last (ratio = 0.30) (Figure 4).

¹³ Detailed quantitative data on the programme's effectiveness are unavailable.

¹⁴ Severe food insecurity means running out of food, going to bed hungry or going at least a whole day and night without food for at least 1 day in the previous 30.

Figure 4: Oxfam's administrative costs per \$19 transfer



Source: OPM, from calculations based on financial records from Oxfam.

To better understand this ratio we look at the split between one-off and recurrent costs. Each subsequent transfer required less investment in one-off activities such as targeting, training and the sorting out of contracts. This allowed Oxfam to approach potential donors with a different proposition to the one they had during the first phase. For subsequent phases, donors were keen to fund the programme as Oxfam emphasised that the money would be used for direct transfers to beneficiaries since most of the set-up activities had already been carried out.

6.2.2 What the administrative costs were spent on

Table 2 shows that of the \$12 spent to transfer each \$19 of value, \$8 went to one-off costs while the other \$4 went to recurrent activities. In other words, if the same beneficiaries had continued to be paid the transfer, each additional transfer would have cost \$4.

Table 2: Distribution of administrative costs of Urban Livelihoods and Social Protection Programme, by activity

Activity	Cost (\$000)	Per \$19 transfer (\$)	Share of admin cost (%)	Share that is staff costs (%)
One-off activities	235	8	65	80
Design	39	1	11	82
Institutional arrangements	36	1	10	84
Fee to Oxfam HQ	25	1	7	N/A
Communication / advocacy	43	1	12	72
Training	8	0	2	97
Targeting / registration	45	1	12	76
M&E (one-off)	38	1	11	82
Recurrent activities	127	4	35	60
Disbursement	71	2	20	46
Fee to Oxfam HQ	6	0	2	N/A
M&E (recurrent)	50	2	14	79
Total	362	12	100	72

Source: OPM.

6.2.3 Factors affecting the cost

The *one-off programme costs*, while quite substantial, were not greatly affected by the choice of M-Pesa as the payment mechanism. Even the activity that took the biggest portion of one-off costs, the targeting and registration of beneficiaries that cost nearly \$45,000, consisted largely of staff time to identify beneficiaries, and general office overheads that would still have been needed if a manual payment system had been used. The mobile-money-specific activities of purchasing mobile phones for those that did not have one, buying SIM cards and paying Safaricom's activation fees amounted to a small proportion of the targeting budget (less than \$9,000). Some of the other main activities incurring expenditure were:

- The \$39,000 of *design costs* included analytical studies on the programme's location and benefit value, as well as the implications (effectiveness and cost) of alternative methods of giving out cash. Most costs were staff time which made up about four-fifths of the total.
- As consortium lead, Oxfam spent a lot of time on *institutional arrangements*, working on establishing relationships with key stakeholders, preparing and presenting funding proposals as well as securing agreements and commitments for support. Here the use of Safaricom as a payment provider reduced costs because the company had previously worked with Oxfam's consortium partners, Concern Worldwide. Oxfam's contract with Safaricom was modelled on the earlier contract and so not much time was spent on contract negotiations in its role as payment provider. What did take some time (approximately 10 months) was the contracting for the \$108,000 donation that Safaricom made to the programme.
- A lot of resources—some \$43,000—were spent on raising awareness of the crisis as well as on advocating for the set-up of a broader, government backed social protection programme for all urban informal settlements in Nairobi. These costs peaked during the second phase, reflecting the increase in advocacy activities to showcase the success of the first phase of payments and to raise funds for the second phase.

The increased cost-efficiency derived from repeating transfers to the same group of beneficiaries is evident from the decline in costs during the second and third programme phases. Costs for design and institutional arrangements declined quite substantially after the first phase of payments. So, too, did targeting and registration costs, since most beneficiaries were enrolled in the first phase: this is the biggest driver of the drop in one-off costs over the three payment phases. For the small amount of costs that remained to enrol new beneficiaries, the amount had little to do with the payment mechanism as most of the expenditure was on the targeting process rather than on Safaricom activation fees or the purchase of phones and SIM cards.

The cost of *recurrent activities* also declined over time as a proportion of the transfer value. The transaction fees to Safaricom itself for the use of M-Pesa represented only a small (and consistent) share of this cost. Much of the significant investments in supporting the disbursement of the transfer were spent on staff time for supervision and case management. The total value of staff time for disbursement was reduced from nearly \$14,000 in the first phase to about \$5,000 in the last. Some of this may be attributed to a learning curve that might hold true for any programme that runs for more than one phase, where less oversight and case management are required for each subsequent transfer. But in the case of the mobile money system the effect was more pronounced because, aside from regular case management (e.g. updating beneficiary records) and ongoing liaison with government and other stakeholders, staff performed no major resource-intensive tasks. This is especially true for the second and third payment phases. If Oxfam had been delivering cash themselves (manually), their staff would have had to set up temporary paypoints, an exercise that would have involved hiring security and additional transport costs, which would remain fairly constant over time

6.2.4 The contribution of M-Pesa

The reduction of costs with each phase of transfers has two dimensions: it represents a reduction in both one-off and recurrent costs. First, as would be the case with any programme regardless of the payment mechanism, fewer one-off activities associated with design and targeting are carried out over time. Similarly, the introduction of an innovative method of payment also involves the use of a lot of resources—mainly staff time—during the initial stages of the programme for activities such as advocacy and sensitisation. Resources spent on those one-off activities, too, gradually decrease.



Photo: Concern

A second angle is that while the M-Pesa system requires significant resources initially for the recurrent activities such as monitoring and case management, gradually, both programme staff and beneficiaries become more familiar with the system, thereby reducing the overall recurrent cost per transfer. Mobile money becomes rapidly more cost-efficient with an increasing number of transfers.

The question remains as to whether a mobile-money system used for a single emergency cash transfer is likely to issue enough payments to reach this point of greatly improved cost-efficiency that results from repeated transfers. Even after 18 months of implementation, Oxfam's component of the Urban Livelihoods and Social Protection Programme still demonstrates a fairly high ratio of administrative costs compared to the total value of transfers to the beneficiary (\$64 in administration for every \$100 disbursed for all phases combined), owing to the costs of designing the programme, bringing together the consortium, conducting an intensive—and ultimately successful—advocacy campaign to bring in resources to respond to the drought, and incurring high costs of targeting. If the programme had confined itself to the six-month period that it had originally intended the administrative burden of the programme would have been much higher.

We therefore see that it would be in the interests of the aid agency, if it wished to demonstrate value for money, either to set up a transfer programme and continue it for some time, perhaps even after the immediate crisis has passed, or else to join onto the end of another agency's programme where the set-up costs have been borne elsewhere. A longer programme can also encourage the payment provider, such as Safaricom, to see the potential of a mutually beneficial partnership, making it willing to finance many of the one-off costs associated with setting up the programme. If implementing agencies are working as a consortium, then the potential for scale makes it even more attractive for the payment provider to provide extra support.

7 CASE STUDY 2: SOS CHILDREN'S VILLAGES KENYA WITH sQuid

7.1 THE MARSABIT EMERGENCY RELIEF PROGRAMME (ERP)

7.1.1 Programme objectives and context

SOS Children's Villages Kenya (hereafter SOS Kenya) implemented an innovative emergency programme that included a cash transfer component in Marsabit, northern Kenya, in September 2011 in response to the food security crisis. Livestock productivity had declined rapidly owing to inadequate recovery from previous shocks and longer trekking distances triggered by depletion of water and pasture. The situation was exacerbated by an upsurge in conflict incidents over resources and livestock disease outbreaks in Marsabit and three neighbouring districts.

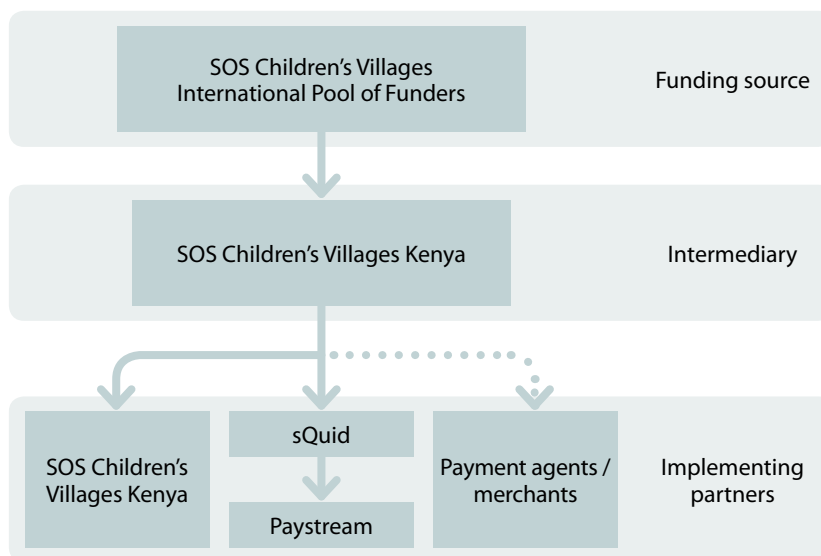
The programme's goal was to ensure that people affected by frequent droughts, especially women and children, were able to secure access to food, drinking water, health services and sanitation. It was implemented in five villages. The programme was multifaceted in terms of its interventions, of which a cash transfer using contactless smart cards was one. This case study focuses on that cash transfer, in which SOS Kenya delivered e-transfers of vouchers and cash in partnership with two implementing organisations, sQuid and Paystream.

Between October 2011 and May 2012 some 2,000 households each received a monthly sum of KES 1,000 (\$13) in cash, provided in an electronic 'wallet' on the card, and KES 6,000 (\$75) as an electronic food voucher, in two-weekly instalments of KES 3,500 at a time.

7.1.2 Institutional arrangements

The programme was funded through donations channelled via SOS Kenya's various global sponsors to SOS Kenya who implemented the programme (Figure 5). They outsourced all beneficiary payments to sQuid, an international contactless card, payments and transactions company that was the lead technical partner in the programme¹⁵. In turn, sQuid contracted Paystream, an international payments network and infrastructure company, to provide the payments network and physical network hardware.

Figure 5: Partners in SOS Kenya's cash transfer



Source: OPM, from discussion with SOS Kenya. Note: Merchants were implementing partners but received no direct payment from SOS Kenya.

¹⁵ See www.squidcard.com/SOS_Kenya.html

The other parties involved were three local traders who were equipped with the payments technology. SOS Kenya signed a memorandum of understanding with selected shops and merchants, who charged no transaction fees for their services (hence the broken line in Figure 5 above) because they saw the agreement as an opportunity to gain customers.

7.1.3 How the programme was implemented

Each household was issued with a contactless smart card bearing the beneficiary's name, national identity card number and the name of an alternative family member who could collect the food in the event that the beneficiary was unable to (Figure 6). sQuid provided each of the merchants or payment agents with a POS terminal.

Figure 6: sQuid card and POS terminal



Source: sQuid Kenya (2012).

The smart card contained two 'e-wallets': the food voucher, topped up to KES 3,000 every two weeks, and the unconditional cash worth KES 500 every two weeks. With the food voucher, households could purchase preselected food items as per World Food Programme rations from selected shops upon presentation of a national identity card. The unconditional wallet gave households cash to purchase goods like firewood or gas, which are essential for the preparation of the food obtained through the conditional e-wallet. Households were not required to use the whole value in one transaction, but any money left unspent after two weeks would not remain on the card.

The POS device connected to a back-end system, similar to normal debit or credit card systems, managed by Paystream and sQuid Card via Airtel's mobile network. SOS Kenya made direct payments to the shopkeepers according to reports generated by the card management system.

7.1.4 The decision to use a smart card

Before starting the programme SOS Kenya carried out a short analysis of the cost implications of different payment options including formal banks and mobile money as well as the sQuid card. The agency found three drawbacks with using a bank:

- First, the selection of payment mechanism was influenced by SOS's wish to ensure that at least KES 3,000 of every KES 3,500 payment would be used for food. Using banks would have meant that beneficiaries would have had to withdraw money, then look for a place to buy the food at a fair price. While SOS Kenya could have selected merchants to sell the food at negotiated prices, this would have required monitoring.
- Second, the banks had no branchless banking channels (ATMs or local bank payment agents such as retailers or postal outlets) close to the beneficiaries. Beneficiaries would have had to come in to Marsabit town to collect their benefit, incurring costs of time and transport.
- Third, Kenya Commercial Bank and Equity Bank's proposed charge of KES 200– 220 per over-the-counter transaction (about 6% of the two-weekly transfer value) was considered by SOS Kenya to be too high for them to absorb without passing it onto the beneficiary¹⁶.

¹⁶ This is higher than the average 4% Oxfam paid to Safaricom under its M-Pesa programme.

As for mobile money, the lack of consistent mobile network coverage by Safaricom made the M-Pesa platform unfeasible. In fact, the sQuid system uses the Airtel network that, according to SOS Kenya staff, has better coverage and signal strength in Marsabit than other phone operators. In addition mobile money was felt to be unsuitable because 80% of the programme beneficiaries were pastoralists who do not generally own mobile phones and who have low levels of literacy.

The sQuid card faced similar constraints to banks in that beneficiaries would have to go to Marsabit town to use the benefit. However, it had advantages over bank cards in that the card could be used as a food voucher as well as for cash. Local merchants charged no transaction fees, but SOS Kenya paid sQuid a one-off network connection fee and recurrent transaction / settlement fees of 1%. SOS Kenya were able to track sQuid card transactions in Marsabit in real time, and to export the data into Excel for analysis.

7.1.5 The impact of the programme

According to SOS Kenya an in-depth independent evaluation of the emergency programme was never undertaken. Questions around the appropriateness and impact of the programme cannot be rigorously answered (*pers. comm.*, November 2013). The view from SOS programme staff is that the programme provided immediate relief to families facing starvation. In addition the unique delivery mechanism offered at least two advantages. First, it allowed for a dual benefit, a voucher and an e-wallet for cash, delivered and accounted for through the same system. Beneficiaries could therefore get both food and other essential items required to prepare it. Second, by giving them a card to 'buy' their food, their dignity was restored.

7.2 THE COST OF IMPLEMENTING THE ERP

7.2.1 Total administrative cost

The SOS Kenya–sQuid programme delivered food and cash worth \$1,393,000 to beneficiaries at a total cost of \$204,000. This means that administrative costs made up about 13% of the total programme costs.

Cost–transfer ratio	=	\$204 000 / \$1 393 000	=	0.15
Admin costs as % of total budget	=	\$204 000 / \$1 597 000	=	0.13

The cost–transfer ratio implies that it cost \$15 in administration to deliver every \$100 worth of value (cash and food) to the beneficiary. For the actual transfer value of \$87, administrative costs were therefore just under \$13.

7.2.2 What the administrative costs were spent on

Of the \$13 spent to transfer each \$87 of value, \$10 went to one-off costs while the other \$3 went to recurrent activities (Table 3).

Table 3: Distribution of administrative costs for SOS Kenya, by activity

Activity	Cost (\$000)	Per \$87 transfer (\$)	Share of admin cost (%)	Share that is staff costs (%)
One-off activities	163	10	80	27
Design	56	4	28	32
Institutional arrangements	7	0	4	38
Communication / advocacy	42	3	21	12
Training	15	1	7	38
Targeting / registration	36	2	18	26
M&E (one-off)	7	0	3	34
Recurrent activities	41	3	20	28
Disbursement	34	2	17	27
M&E (recurrent)	7	0	3	36
Total	204	13	100	27

Source: OPM.

7.2.3 Factors affecting the costs

The most costly one-off activities were the design followed by the communication and advocacy costs.

- Of the \$56,000 spent by SOS Kenya and its partners on programme design, the biggest components—equipping and maintaining the programme offices, analysing the payment alternatives and searching for suitable payment partners—were incurred because SOS had not run a programme like this before and so had to develop the needed capacity. Much of it was related to the food voucher component, such as identifying and assessing food stores based on their stock capacities and previous experience with emergency programmes; this would have been the same even if a paper voucher scheme had been used. Only a relatively small amount of around \$5,600 was linked directly to the sQuid system, for purchasing POS terminals and setting up the Paystream link and management information systems. If SOS Kenya were to use sQuid for a follow up programme, there would be some savings as the system-specific costs would not be incurred.
- Communication and advocacy costs were high (\$42,000) to raise awareness of the programme within the communities as well as with donor partners. The technology they used was not only new to the beneficiaries but also to humanitarian agencies in Kenya. While sQuid had its own budget for marketing and funded some of the advocacy activities, SOS Kenya spent about \$28,000 on public relations materials including brochures, films and photography. These costs are therefore a consequence of the new technology but not an intrinsic part of it; they may decline for future programmes as the technology becomes more common.
- Targeting costs of \$36,000 had to be incurred because the programme was new. Again, the cost of purchasing smart cards was only a small proportion of the total, at less than \$8,000. The remaining costs of staff time, travel and office consumables would have been incurred regardless of the payment mechanism used.

Disbursement activities cost the programme about \$34,000. Some of this was for oversight of the food voucher component, such as monitoring the quantity and price of products sold to recipients. This would have been avoided had the whole benefit been in cash but would have been necessary for any food voucher system. Other activities were more directly related to the use of the smart card: the biggest disbursement cost (over \$11,000) was for the transaction fees to sQuid and Paystream for access to the payments network, though this is only 1% of the value transferred.

The newness of the technology generated additional expenses. On a number of occasions (six times out of 16, according to SOS Kenya staff) the mobile network had technical difficulties which made it impossible to load

the value onto the smart cards. On these occasions, SOS Kenya would collect all beneficiary cards and transport them back to Nairobi where they would be credited with value at their office, where there was internet access. The cards would then be returned to Marsabit. When the network access in Marsabit was weak, there was also no 'real time' validation of payments: payments could still be processed but their validation on the main system could only happen once connectivity returned. The need to resort to this backup plan increased the cost of staff time, managerial oversight, transport and office expenses, to ensure that the beneficiaries were paid, their payments were processed and that complaints were dealt with¹⁷.

This case study has reviewed an example of a slow-onset emergency programme where SOS Kenya and sQuid were innovators not just in payment for humanitarian assistance but possibly in the field of card payments in Kenya. We find that the use of this innovative technology has had two opposing effects on the cost of delivering the transfer.

1. On the one hand, the programme has benefitted from the interest of its implementing partners in exploring the feasibility of contactless payments in the NGO sector. The costs to SOS Kenya for using the sQuid card were greatly reduced because sQuid heavily discounted its prices, offering a reduction of about 50% for most items and services including the value of its staff time. sQuid also discounted the transaction fee, which was set at 1% of the total transfer value. This suggests that real staff costs have been underestimated.
2. At the same time, in any programme that uses new technologies there is a risk that the technology will fail. SOS Kenya and sQuid found this regularly to be the case when they attempted to reload value onto the cards. Costs therefore increased each time the programme had to use its fall-back method to ensure that payments were made.

As payment providers become more familiar with using a technology there is a chance that early discounts will be revoked. The payoff is that the technology is likely to become more reliable over time, leaving less need to resort to costly alternatives.



Photo: Caroline Berger / Oxfam

¹⁷ Note that poor network connectivity did not increase the cost to beneficiaries of participating, since they were able to use their cards offline and so did not have to travel to an area with a better signal,

8 CASE STUDY 3: CONCERN WORLDWIDE—MARSABIT COUNTY EMERGENCY RESPONSE PROGRAMMES (MRP) USING MANUAL PAYMENT

8.1 THE EMERGENCY RESPONSE PROGRAMME

8.1.1 Programme objectives and context

In 2012–13 Concern Worldwide ran the Marsabit County Emergency Response Programme (MRP), as a follow-up to an earlier programme they had successfully implemented in 2011–12¹⁸. The earlier programme had been aimed at enhancing immediate food security for vulnerable households, mainly pastoralists who had limited livestock assets; protecting livelihoods from the effect of the drought; and supporting local markets. The project design integrated livelihood and nutrition components through numerous interventions. During its first phase this had included a food voucher scheme for 2,000 female-headed households who received KES 2,500 (\$32) each. However, most beneficiaries reported that they would have preferred to receive cash to improve flexibility in the kind of goods they could buy and to help with the timing of purchasing stock.

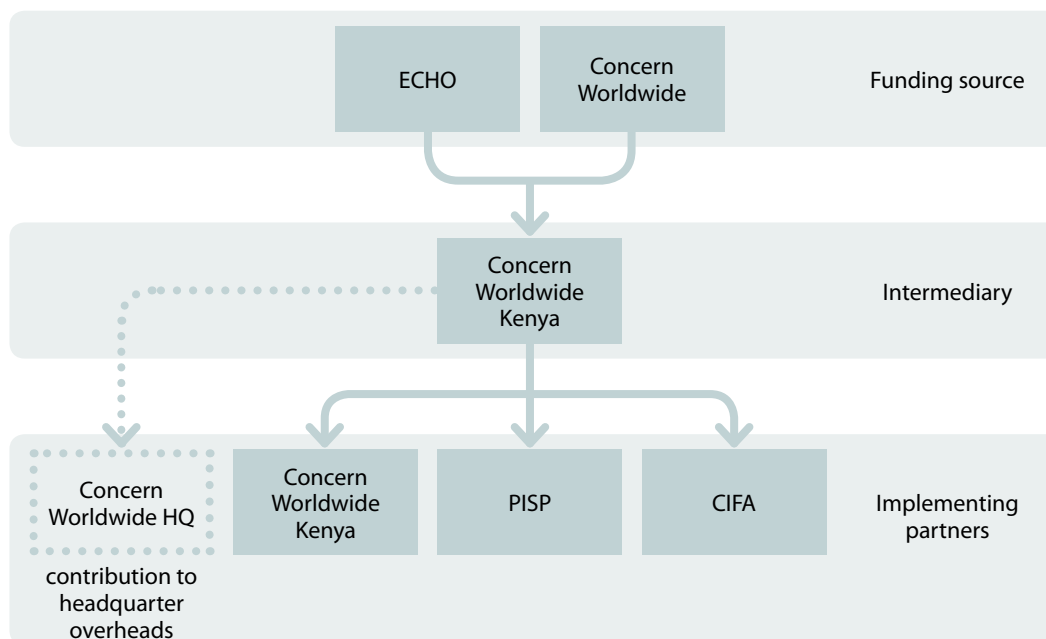
From September 2012 to March 2013 Concern Worldwide implemented the MRP, which not only expanded the livelihoods development interventions but also replaced the vouchers with cash, manually distributed to 1,000 households, most of whom had been part of the first programme. Some 700 households in Moyale and Sololo districts received KES 3,050 (\$39) per month for six months, while 300 households in Chalbi district received KES 2,000 (\$26) per month for the same period since market prices were lower there. This case study reviews the cash transfer.

8.1.2 Institutional arrangements

Most programme costs, including the transfer value, were funded by the European Community Humanitarian Aid Office (ECHO), with some additional expenses funded from Concern's own resources (Figure 7). The programme was implemented and supervised by Concern with on-the-ground implementation support from two local NGOs, Community Initiative Facilitation Assistance (CIFA) in Moyale and Sololo, and the Pastoralist Integrated Support Programme (PISP) in Chalbi¹⁹.

¹⁸ The earlier programme was called, 'Filling the Hunger Gap among mobile livestock keepers affected by extreme drought, and protecting assets in Marsabit County'.

¹⁹ CIFA and PISP also supported Concern in other components besides the cash transfer, such as the procurement of de-worming drugs, irrigation equipment and livestock. The costs of that support are not included here.

Figure 7: Flow of funds for the MRP

Source: OPM, from discussion with Concern. Note: Concern paid some funds to its headquarters as a contribution to overhead expenses.

8.1.3 How the programme was implemented

Concern explored a number of possible payment options, including e-payment mechanisms, before settling on a manual cash transfer. The agency discounted Safaricom's M-Pesa mobile money system for similar reasons to SOS Kenya, i.e. poor network coverage. The option of outsourcing payments to an external logistics company was initially considered but decided against: the security situation made it risky to use a firm that would move around with cash, and the companies indicated that they would charge a premium to ensure secure delivery.

Only local merchants were selected as partners in the programme because Concern felt that they were better placed to deliver cash to beneficiaries as they were part of the community and would be aware of the associated challenges. The implementation of the programme was quite straightforward. The local partners informed beneficiaries of the payment dates. On these dates the beneficiaries brought their identity documents to the payment agent, who would pay out the cash upon verifying the documents and checking the official beneficiary list. The merchants then retrospectively claimed both the transfer value and the transaction charges from either PISP or CIFA. The programme therefore relied on their liquidity. The beneficiaries used the money to buy goods locally, often at the payment agent's own store since the districts covered were very remote and villagers did not have alternative access to markets.

8.1.4 The outcome of the project

The overall effectiveness of the MRP cannot yet be quantified as it was only just being completed at the time of the study and had not yet been evaluated.

8.2 THE COST OF IMPLEMENTING THE MRP

8.2.1 Total administrative cost

During the six rounds of payments a total of \$204,000 was given to beneficiaries (700 beneficiaries × \$39 × 6 months, and 300 beneficiaries × \$26 × 6 months), while administrative costs amounted to \$59,000. The total cost of the cash transfer component of the programme was therefore \$263,000. This includes administrative costs incurred by all stakeholders i.e. Concern Worldwide, PISP and CIFA. Using these figures, cost ratios can be calculated:

Cost-transfer ratio	=	\$59 000 / \$204 000	=	0.29
Admin costs as % of total budget	=	\$59 000 / \$263 000	=	0.22

The cost-transfer ratio means that it cost \$29 in administration to deliver every \$100 to the beneficiary, equivalent to \$11 for every \$39 transfer.

8.2.2 Breakdown of administrative costs

Out of the \$59,000 of administrative costs, about \$44,000 was spent on setting up the programme while the remaining \$14,000 covered the ongoing disbursement and monitoring (Table 4)²⁰.

Table 4: Distribution of administrative costs for Concern Kenya, by activity

Activity	Cost (\$000)	Per \$34 transfer (\$)	Share of admin cost (%)	Share that is staff costs (%)
One-off activities	44	7	76	84
Design	8	1	13	84
Institutional arrangements	9	2	15	85
Fee to Concern HQ	7	1	11	0
Communication / advocacy	5	1	9	88
Training	4	1	8	90
Targeting / registration	7	1	12	87
M&E	4	1	7	62
Recurrent activities	14	2	24	26
Disbursement	10	2	17	18
Fee to Concern HQ	1	0	1	0
M&E (recurrent)	4	1	6	50
Total	59	10	100	69

Source: OPM. The average exchange rate for the period was \$1 to KES 80.

8.2.3 Factors influencing costs

The major question of interest are the factors that enabled Concern to launch its manual cash transfer programme for pastoralists in Marsabit at a cost of only \$44,000, while SOS Children's Villages Kenya had spent some \$156,000 to start up its card-based programme for the same target group in the same district only a few months previously.

The main saving made by Concern was on the programme design, which cost the agency \$8,000 compared with the \$56,000 spent by SOS Kenya. The driving factor here is that Concern's programme was a follow-up to its earlier intervention; the agency only had to switch payment modalities, incurring some small costs of a study of payment mechanisms. They also spent some resources identifying suitable partners. This represents a large saving compared with SOS Kenya which was setting up a programme from scratch, including setting up offices and assessing food stores for their suitability to participate in the programme.

A similar size saving was made in targeting and enrolling beneficiaries, which Concern achieved for \$7,000 compared with SOS Kenya's \$36,000. This is because, again, the MRP did not have to carry out a new targeting process; rather, it benefitted from the existing community-based system where beneficiary eligibility was regularly assessed. Had Concern's cash transfer been a completely new programme (and, indeed, had the programmes been of the same size), the cost of these activities would have been higher, though still not at the same level as SOS Kenya's.

²⁰ Differences in totals are due to rounding.

Once the programmes were in place, Concern's manual transfer consumed \$14,000 in staff and non-staff resources on recurrent activities to distribute about \$200,000 to its 1,000 beneficiaries over the six-month period of operation, while SOS Kenya spent \$61,000 to distribute about \$1.4 million to 2,000 beneficiaries. This means that the manual programme spent about \$1 on the recurrent activities of disbursing and monitoring the transfer for every \$14 of benefit, while the card-based programme spent \$1 on recurrent administrative costs for every \$23 disbursed. We therefore see that while Concern's manual transfer was more cost-efficient during the start-up phases of the programmes, SOS Kenya's card-based approach was relatively more cost-efficient during the subsequent distribution of the transfer. The fact that Concern's programme had half as many beneficiaries and so did not benefit from the same economies of scale is one contributing factor, but this alone does not explain all the difference in cost-efficiency.

One factor that also contributed to this difference was the transaction charge. For Concern the charges that it paid to local merchants for their services made up half of all their recurrent costs (\$7,200 of the \$14,300). The transfer charges were negotiated individually with each local payment agent and they averaged 8% of the transfer value in Moyale and Sololo and 3% in Chalbi district. These rates are considerably more than the 1% fee that sQuid charged SOS Kenya for disbursement. One reason for the higher fees may be that programme implementers were obliged to have contracts with separate service providers because of their small number of beneficiaries sparsely distributed around the target districts, so Concern had less bargaining power. As for the difference within Concern's programme between the higher fees in the CIFA-managed areas of Moyale and Sololo and the lower fees in PISP's Chalbi district, this may be due to the fact that the value of the transfer in the CIFA areas was larger, reflecting differences in market prices, and so the local agents might have requested a higher transaction charge since they had to have more liquidity than the agents in PISP areas.

We see that the overall cost of Concern's and SOS Kenya's programmes has been affected by the attractiveness of the programme to the payment provider and by the presence of competition. SOS Kenya received discounts from sQuid, who wished to test their technology, and paid no commission to merchants with whom beneficiaries used their food voucher because the traders saw a benefit in attracting new custom; in contrast, Concern paid a relatively high commission to merchants in the absence of alternatives.

We conclude that, by implementing a programme where there was little innovation by way of e-payment mechanisms and that, furthermore, was a continuation of an earlier voucher programme during which activities such as targeting and registration had already been done, Concern was able to substantially reduce its start-up costs. However, because of the relatively small scale of the programme, Concern could not easily bargain for cheaper transaction fees during disbursement and all other recurrent costs were also spread over only a small transfer value.

PART C: SUPPORTING SOMALIA THROUGH ITS 'LIFELINES': HAWALA AGENTS AND MOBILE MONEY



Source: UN cartographic section.

9 CONTEXT OF SOUTH-CENTRAL SOMALIA

9.1 THE NEED FOR HUMANITARIAN ASSISTANCE

More than 20 years of conflict and numerous peacebuilding initiatives in Somalia, since president Siad Barre was overthrown in 1991, have resulted in a country that is experiencing fragile stability in some parts and continued violence in others. The northern and northeastern areas, Somaliland and Puntland, are the more advanced with respect to the establishment of political structures and public services. Somaliland has held several elections since it declared independence (not recognised internationally) in 1991; it has its own currency and a basic taxation system, decentralised government provision of health and education services, and an economy based largely on pastoralism and on private sector provision of utilities and transport (Coffey International Development Ltd., 2013; UNDP, 2012). Puntland, which became an autonomous state within a federal structure in 1998 and is not seeking full independence, is experiencing greater instability. While it has a parliament it is described as a 'militarised society' with insufficient resources to enforce the law and to resolve the challenges of piracy along its coast (Coffey International Development Ltd., 2013, p.105).

In contrast the rest of Somalia in the centre and south of the country, often classified as 'south-central', is not governed by any single authority. It consists of a collection of territories variously administered by individual clans, the militant group Al-Shabaab, international military peacekeeping forces from neighbouring countries, and the Somali Federal Government that was formed in 2012. Al-Shabaab is dominant in rural locations; the federal government and the international forces, operating under the name of AMISOM (African Union Mission in Somalia), hold more urban areas including the capital, Mogadishu, and a stretch of land leading northwest from Mogadishu along the Afgooye corridor in the direction of Luuq in the interior. In the absence of a unified government, private businesses have been providing services including in education and health, and have been conducting trade and setting up systems for telecommunications and transport. The repeated conflicts between groups have caused large-scale disruption to agricultural and pastoralist communities and widespread internal displacement of the population, often to camps for internally displaced people (IDPs) in and around Mogadishu.

Many UN agencies and international NGOs have had a continued presence in south-central Somalia for some years. These include, among others, the UN Office for the Coordination of Humanitarian Affairs (OCHA), the office of the UN High Commissioner for Refugees (UNHCR), the United Nations Children's Fund (UNICEF), Oxfam, Concern Worldwide, Save the Children and ACF. These agencies have been engaged in providing basic services to both the settled and displaced populations and supporting initiatives to enable refugees to return to their communities of origin when safe to do so. Numerous organisations have been expelled from parts of the region by Al-Shabaab: reports by Human Rights Watch noted at least eight that were expelled during 2010 alone, with more than a dozen prohibited to work in Al-Shabaab controlled areas during the famine in 2011 (Human Rights Watch, 2011 and 2012). Many national NGOs, too, are operating in the field of humanitarian assistance.

9.1.1 The 2011 crisis and the humanitarian response

Somalia – especially the south-central region – experienced a humanitarian crisis in 2011, during which half its population was estimated to require emergency assistance to improve its access to food²¹. A series of poor rainy seasons over several years had led to a drought that, when combined with the long decline in agricultural productivity arising from 20 years of civil conflict, resulted in very low agricultural yields, the death of livestock and low prices for animals. This made it hard for agropastoralist and pastoralist households to earn a living or provide food for their families. Food prices had tripled since 2010. Many households were obliged to move to urban areas to seek food assistance; for these households, their lack of land and their displacement compounded the difficulties posed by the environmental and economic shocks. By mid-2011 some 3.7 million people were estimated to be 'in crisis', and famine was declared in five regions of south-central Somalia in July and August of that year (FSNAU and FEWSNET, 2011a and 2011b). The famine, described as, 'unprecedented' by the UN Development Programme, was reported to have led to the deaths of tens of thousands of people (UNDP, 2012, p.xviii). The number of IDPs across the whole of Somalia at that time was estimated at 1.4 million (United Nations High Commission for Refugees, 2011).

²¹ Background information is derived from Oxfam (2012).

The declaration of famine triggered a massive and rapid response by large numbers of humanitarian NGOs. This included in-kind provision of food and non-food items, as well as voucher-based and cash-based interventions. The organisations attempted to minimise overlap by designating separate geographical areas of intervention for each. Coordination was further promoted by the establishment of a Cash Consortium by four agencies in south-central Somalia in mid-2011 (Kweyu, 2013)²². A Cash and Voucher Monitoring Group was then set up by six agencies in September that year. The group aimed to coordinate the monitoring and evaluation of the collective cash- and voucher-based response by providing common tools for the NGOs to track the effectiveness of their projects and to identify the impact of their intervention on beneficiary households and on markets (Longley *et al.*, 2012).

The humanitarian programme coincided with a much improved harvest in late 2011 and the famine in the south was declared over in February 2012 (FSNAU and FEWSNET, 2012). However, many millions of people still faced food insecurity and continued to receive assistance from the international community to meet their food- and non-food needs and to re-establish a means of earning a living.

The case studies here look at programmes delivered by Oxfam and Concern Worldwide to IDPs and vulnerable urban residents in Mogadishu, south-central Somalia, during the crisis and post-crisis phases from September 2011 to September 2013.

9.2 FINANCIAL INSTITUTIONS IN SOUTH-CENTRAL SOMALIA

9.2.1 *Hawala* agents predominate

The Somali economy relies heavily on money from abroad, not only from the humanitarian community but also from its diaspora. Remittances from the diaspora are estimated at around \$1.3 billion per year in Somaliland and Puntland alone, an amount exceeding the estimated \$1.1 billion contribution of humanitarian and development assistance for the whole of Somalia in 2011 (FSNAU, 2013; Organisation for Economic Cooperation and Development, 2013). In south-central Somalia much of this funding from overseas arrives via well established money transfer agents, the *hawala* agents, who have extensive networks of distribution points throughout the country. These are institutions that transfer money nationally and internationally, in the absence of a formal banking system. About 10 are thought to be sufficiently big to be able to handle cash transfers from humanitarian agencies in Somalia, of which the largest is Dahabshiil (Adeso, 2013). *Hawala* agents are deemed to be culturally acceptable and to have a quick response time and an extensive geographical reach.

Hawala agents have achieved their dominance of the financial services sector to a large extent because of the lack of a formal alternative. No central bank existed in south-central Somalia until 2012, and there are no registered private commercial banks (Central Bank of Somalia, 2012). There are no cash machines, and no POS machines in stores to accept bank cards. Nor is there likely to be a national payments system in place for many years:

The financial requirements and technical complexities of adopting a national payments system greatly hinder the Central Bank's ability to develop one in the near term. [...] [It] also requires cooperation with banks and other financial institutions [...] CBS [the Central Bank of Somalia] must establish a close working relationship with them. If this relationship does not materialize and participation from banks is limited or confined to certain regions, it will not be a truly national (or effective) system. (Central Bank of Somalia, 2013. p.15).

Humanitarian organisations have been using *hawala* agents to distribute cash for a number of years. Oxfam, for example, first used this method to transfer cash to beneficiaries in Puntland in 2004, and later with Dahabshiil in south-central Somalia in 2006–07. It continued to use *hawala* agents during the famine and its immediate post-crisis phase in late 2011 and early 2012. A threat to the continued use of this payment method is posed by the recent closure of many *hawala* agents' international bank accounts by global financial organisations which fear that their services are being used to fund terrorist and piracy operations in the region.

²² ACF, Adeso, the Danish Refugee Council and Save the Children.

9.2.2 The rise of mobile money

In 2011 two mobile money services were set up in south-central Somalia, offering the population a new type of informal financial institution. These were the 'EVC+' service launched by the area's largest mobile network operator, Hormuud, and the 'E-maal' mobile money service launched by one of its competitors, Nationlink.

Somalia has a huge appetite for telecommunications. The market penetration of mobile phones—the ratio of the mobile phone connections to the population—was estimated at over 40% in 2012, higher than about 15 other countries in sub-Saharan Africa (GSMA and Deloitte, 2012; GSMA Mobile for Development Intelligence, 2013b). The market is fragmented, with about a dozen different companies operating (including some working only in Somaliland), and no means of making a telephone call between customers of different companies. Network operators view the provision of a mobile money service as a strategy to attract and retain customers. For this reason Hormuud and Nationlink currently offer the service free: there is no charge for either sending or withdrawing money via the mobile money facility. The telephone operators acknowledge that this situation—which contrasts with the fee-paying model used by the most widely known mobile money service, M-Pesa in Kenya—is unsustainable in the long term and that a small charge may eventually be introduced over the next year or so.

The sub-Saharan Africa region has the world's highest rate of utilisation of mobile money, with more than 16% of people reporting having used it in the past year, compared with no more than 5% in any other region. Within the region, Somalia has one of the highest rates of utilisation after the system's earliest adopter, Kenya (Demirguc-Kunt and Klapper, 2012). The Global Financial Inclusion database reports that Somaliland has the world's highest rate of people using mobile money to pay bills, at some 26% of the population (Demirguc-Kunt and Klapper, 2012)²³.

The umbrella organisation for mobile operators in emerging markets, GSMA Mobile for Development, notes five key factors that drive the emergence of mobile money systems: the regulatory environment, the consumer environment, the market environment, the existence of supporting infrastructure and mobile penetration (GSMA Mobile for Development Intelligence, 2013a). Conditions in Somalia in each of these areas have strongly encouraged the development of the service. It is almost totally unregulated; financial inclusion of consumers in other systems is low, and attitudes towards mobile money are warm; formal banks are largely inaccessible; mobile networks are quite widespread, and mobile penetration is high.

Consumer attitudes towards mobile money in Somalia have largely been enthusiastic because the service allows people with no access to a formal banking system to make relatively quick and secure financial transactions. Users of mobile money in Somalia are particularly positive about the system in the light of the widespread insecurity in the country. The chief benefit is that it renders it unnecessary to carry cash, thereby greatly increasing users' sense of safety. People who use *hawala* agents to send or withdraw money can be observed queuing in the street, and will be known to be carrying cash. There is a risk of robbery; and if they withdraw cash in dollars they may have to exchange it into Somali shillings at unfavourable rates. In contrast, if a user is robbed of his or her phone there is less possibility for the mobile money funds to be accessed as they require a PIN. Other benefits are that the mobile wallet stores its value in US dollars, which is considered a more reliable option than Somali shillings; and that the time taken to make or receive a *hawala* agent payment incurs a transaction cost which is more or less eliminated under a mobile money system where transfers can be made instantly.

Despite the many benefits of the mobile money system it is not yet feasible to use it everywhere. Even though network coverage is very widespread, the commercial use of mobile money is less common in rural areas. With fewer traders accepting mobile money in these more remote locations, a household wishing to use the service might have to spend more on travel to reach a trader that used mobile money, or might have to accept a poor exchange rate into Somali shillings when cashing out credit from their account. In such places, *hawala* agents continue to have a good reach and are a trusted and realistic option. A forthcoming project by UNICEF and Oxfam plans to use mobile money in some urban locations and *hawala* agents in more rural areas.

²³ Data are unavailable for south-central Somalia.

9.2.3 The use of mobile money by NGOs

The widespread use of mobile money in urban areas, notably Mogadishu, made the system a possible mechanism for the distribution of cash-based emergency assistance for aid organisations working in the capital. Oxfam trialled the technology with a one-off transfer after the immediate crisis of the famine had passed, with its 'E-Cash Pilot' that it developed and implemented together with a local NGO, Hijra, between May and August 2012. The success of the pilot has led to the continued use of the e-transfer method by Oxfam, where feasible, and its rapid adoption by other international organisations. Oxfam used it again in its DFID-funded cash transfer programme in the Lower Shabelle region of south-central Somalia starting in late 2012.

Concern Worldwide quickly followed and has used mobile money for the cash component of all its transfer programmes since September 2012, including three that provide exclusively cash (rather than as an accompaniment to a food voucher): these are the programmes funded by ECHO starting from November 2012, the International Organisation for Migration (IOM) from March 2013 and the Norwegian Ministry for Foreign Affairs (MFA) from May 2013. The International Committee of the Red Cross began using mobile money for 8,000 households in Kismayo in mid-2013, and introduced a programme to a further 4,500 households in Mogadishu in late 2013. Other agencies such as Mercy Corps and the Norwegian Refugee Council have also been developing, or considering the introduction of, cash transfers to vulnerable households by mobile money.



Photo: Concern

10 CASE STUDY I: OXFAM'S CASH TRANSFERS THROUGH *HAWALA* AGENTS DURING THE FAMINE

10.1 OXFAM'S EMERGENCY CASH TRANSFER PROGRAMME

10.1.1 Programme objectives

One component of Oxfam's response to the famine in south-central Somalia was a large programme of unconditional cash transfers to over 12,500 households²⁴. Its aim was to ensure that IDPs living in nine camps in Mogadishu could meet their basic food and non-food needs. Six rounds of transfers were provided between October 2011, shortly after the famine was declared, and August 2012. The value was set at \$75 per round per household since this was estimated by the Food Security and Nutrition Analysis Unit (FSNAU) to be the minimum amount required to satisfy typical basic monthly needs. Beneficiaries were selected in an exercise that identified households that matched certain target categories. These included pregnant or lactating women (nearly half the recipients); female-headed households; households whose children were receiving treatment for malnutrition; and a small number of other groups such as disabled or elderly people without support. The intervention was Oxfam Great Britain's (Oxfam GB's) first large unconditional cash transfer programme in south-central Somalia.

10.1.2 Institutional arrangements

The programme—both the transfers themselves and the administrative costs—was funded by donations from three countries: SIDA, the United Kingdom's Department for International Development (DFID), and the Canadian International Development Agency (CIDA) (Table 5). Each channelled its funds through Oxfam.

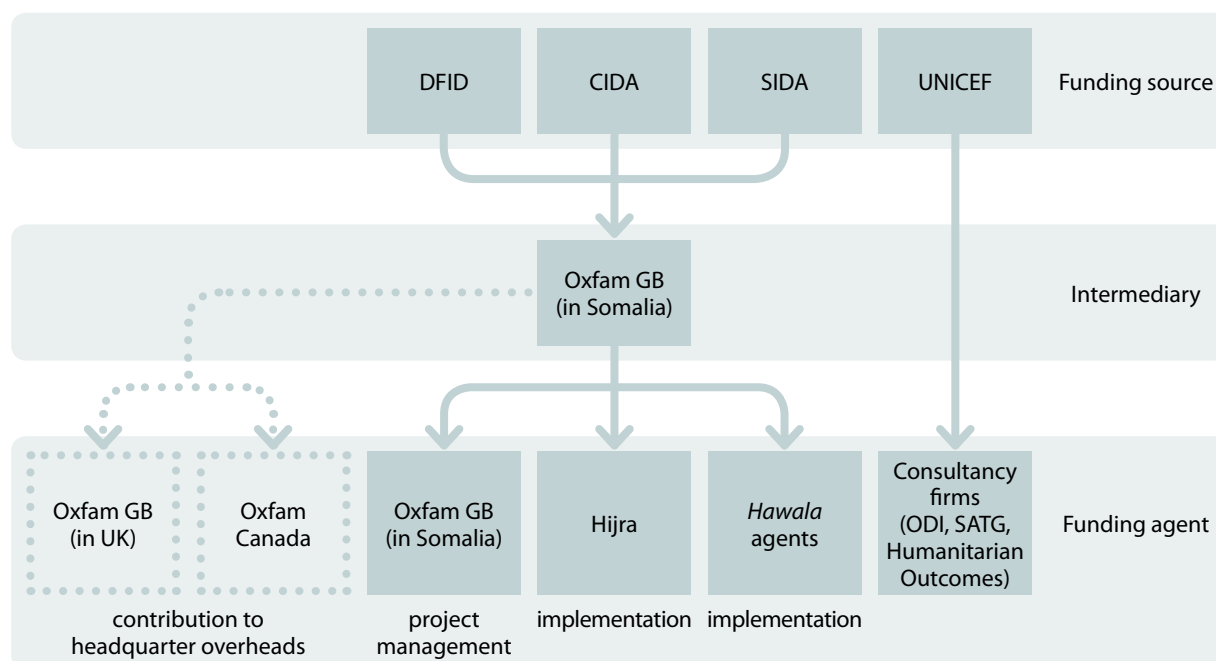
Table 5: Number of beneficiaries per transfer round, by funder

Funder	No. of beneficiaries					
	Oct 2011 Round 1	Jan 2012 Round 2	Feb 2012 Round 3	Mar 2012 Round 4	Jul 2012 Round 5	Aug 2012 Round 6
SIDA	3113	3113	3113	0	0	0
DFID	6000	6000	6000	6000	0	0
CIDA1	3406	3435	3435	6548	12540	12540
Total	12,519	12,548	12,548	12,548	12,540	12,540

Source: Oxfam. Note: (1) CIDA added to its caseload the beneficiaries previously supported by SIDA and DFID once funds from those two agencies came to an end, so that all beneficiaries received six transfers. Some of its extra funding in rounds 5 and 6 came from a public appeal under a separate contract to CIDA's funding for the other IDP camps.

Oxfam passed on the transfers to beneficiaries through a *hawala* agent, either Dahabshiil or Qaran Express. It kept the remaining sum for its own administrative costs and those of Hijra, the local NGO that carried out the on-the-ground activities such as registering beneficiaries and overseeing distribution (Figure 8). In line with its regular requirements Oxfam also paid a proportion of the value of its contracts with DFID and CIDA to Oxfam in the UK and Canada, as a contribution towards their headquarters' oversight of the programme as well as overhead expenses unrelated to the specific programme, and the general funding of country offices. UNICEF separately funded a team to develop the monitoring instruments, support regular data analysis and carry out an independent evaluation, under phase 1 of its technical assistance to the Cash and Voucher Monitoring Group of which Oxfam was part.

²⁴ Other components included improvements to water and sanitation services and public health campaigns.

Figure 8: Flow of funds for the Emergency Cash Transfer Programme

Source: OPM, from discussion with Oxfam.

For each disbursement Oxfam would first pay the *hawala* agents the value of the transfer plus any commission, and then instruct the release of the funds to beneficiaries. The process by which the beneficiaries collected the money from the *hawala* agent was almost exactly the same as if they had been sent money from any other source such as a relative. They would attend the *hawala* agent in person and queue up to receive the funds. The agents initially experienced difficulties with the influx of beneficiaries all queuing on the same day, making it hard for them to conduct their regular business with other users. This was solved by the agents opening on the last Friday of each month, when they would normally be closed, to deal with Oxfam's transfer, and by their opening of additional temporary paypoints to deal with programme beneficiaries. After each payment both the *hawala* agent and the beneficiary signed a voucher to confirm receipt. The *hawala* agent collated the vouchers from each round and sent them to Oxfam for verification and reconciliation. Any funds not collected by beneficiaries remained in the account of the *hawala* agent for the next disbursement. Only a handful of such cases occurred each payment round, usually when households had moved away from the programme area.

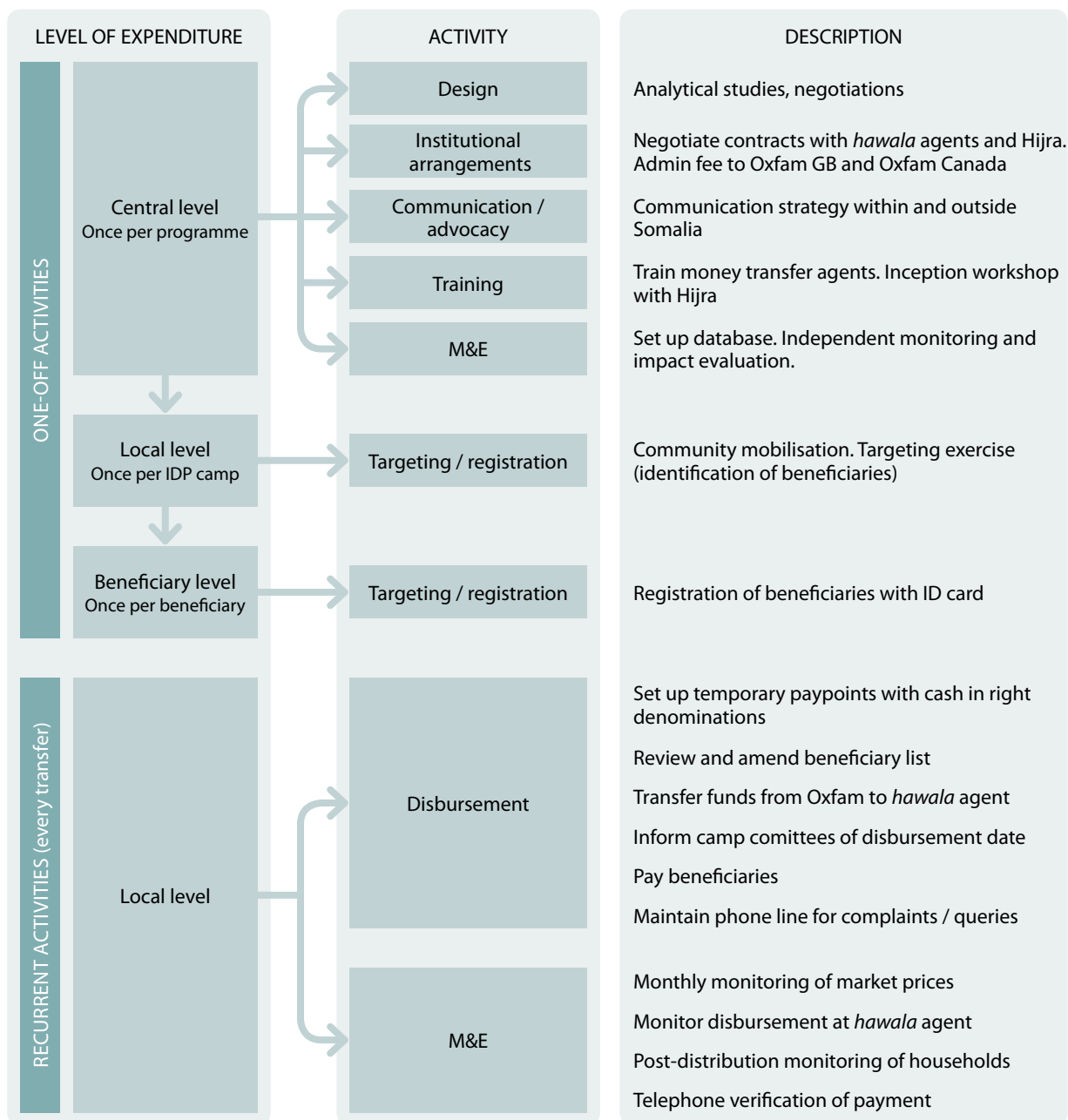
10.1.3 How the programme was implemented

Oxfam, Hijra and the *hawala* agents carried out a series of activities in August and September 2011 to set up the programme (Figure 9). In the terminology of the framework for this study these are the *one-off* activities at central, local and beneficiary level. These included designing the programme, negotiating contracts, training the implementing partners, setting up a database, and enrolling beneficiaries. Thereafter they had a cycle of *recurrent* activities each time they issued a cash transfer payment. This included tasks related to the disbursement itself, such as ensuring that beneficiaries would have a place to go to access the cash and informing them when it would be available, and also monitoring activities to check that beneficiaries had received the right amount and to find out what effect it was having on their well-being.

10.1.4 The outcome of the programme

The survey of beneficiaries carried out by Oxfam and Hijra after transfers had been distributed indicated that the programme was broadly achieving its objectives of improving food security. In interviews after the final transfer nearly all households—94%—reported having spent at least some of the money on food; four-fifths said that they were eating now more meals per day, and with a greater variety of foodstuffs (Oxfam, 2012c). The precise magnitude of the change attributable to Oxfam's programme is not known owing to the absence of a control group, the multiple humanitarian interventions taking place simultaneously and the greatly improved harvest during the intervention period.

Figure 9: Emergency Cash Transfer programme activities



Source: OPM, from discussions with Oxfam.

10.2 THE COST OF IMPLEMENTING THE EMERGENCY CASH TRANSFER

10.2.1 Total administrative cost

The total amount of money disbursed to beneficiaries over the course of the six rounds was **\$5,568,000**. This is about 99% of the expected value of 12,548 beneficiaries × 6 rounds × \$75 (= \$5,646,600) since a few transfers were not collected and some beneficiaries left the programme area.

The cost of administering the programme is estimated at **\$1,124,000**, giving a total programme cost of **\$6,692,000**. This covers the total administrative cost to all implementing partners, not only Oxfam but also Hijra, the money transfer agents, and UNICEF-funded consultants. The key cost ratios are therefore:

Cost-transfer ratio	=	\$1,124,000 / \$5,568,000	=	0.20
Admin costs as % of total budget	=	\$1,124,000 / \$6,692,000	=	17%

The cost-transfer ratio means that it cost \$20 in administration to deliver every \$100 to the beneficiary. Since the transfer value was \$75 the cost of administering each transfer was therefore \$15 ($75/100 \times \20).

10.2.2 What the administrative costs were spent on

Disaggregating the costs by the activities shown in Figure 9 above we find that one-quarter of the administrative cost, or about \$281,000, was spent on one-off activities to set up the programme; the remaining three-quarters (\$843,000) was devoted to the tasks associated with the regular distribution of the transfer (Table 6). So, of the \$15 administration per transfer, \$4 is the share for one-off costs and \$11 is for recurrent costs. If Oxfam had continued supporting the same beneficiaries with additional transfers of the same value, the administrative cost of every extra transfer would therefore have been \$11. The one-off costs would be divided across more transfers and would gradually decline as a share of the overall total.

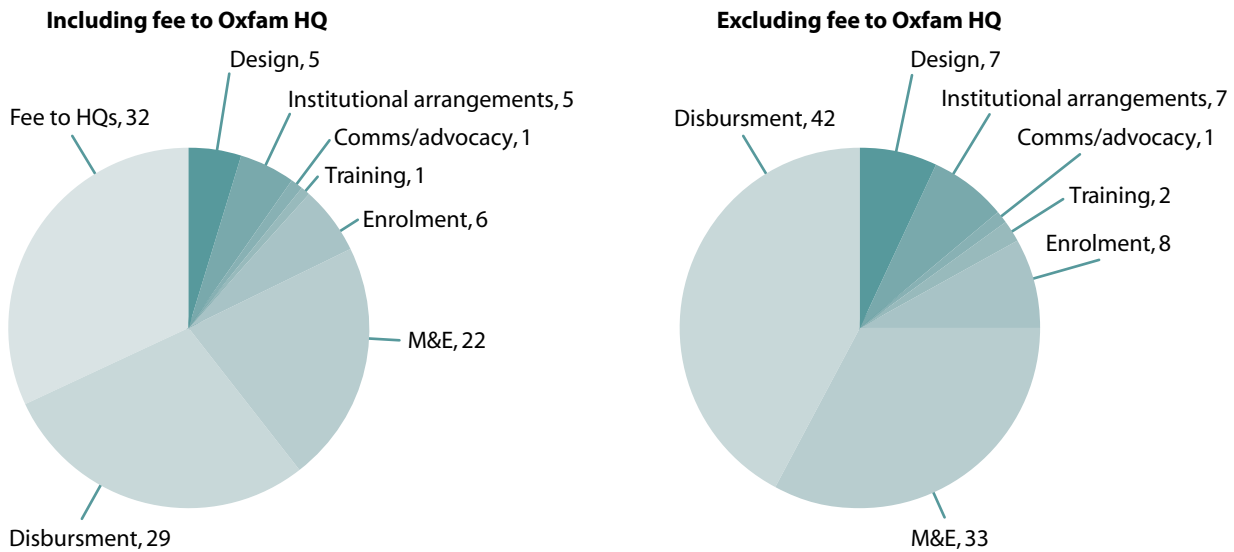
Table 6: Distribution of administrative costs by activity

Activity ¹	Cost (\$000)	Per \$75 transfer (\$)	Share of admin cost (%)
One-off activities	281	4	25
Design	56	1	5
Institutional arrangements	51	1	5
Fee to Oxfam HQ	14	0	1
Communication / advocacy	10	0	1
Training	14	0	1
Targeting / registration	63	1	6
M&E	72	1	6
Recurrent activities	843	11	75
Disbursement	322	4	29
Fee to Oxfam HQ	343	5	31
M&E (recurrent)	178	2	16
Total	1,124	15	100

Source: OPM. Note: (1) 'Fee to Oxfam HQ' has been separated out from the 'Institutional arrangements' activity to distinguish it from other activities directly related to the contract.

10.2.3 Factors affecting the cost

What features of the design of Oxfam's Emergency Cash Transfer programme contributed to these overall costs? Figure 10 below, and Table 6, show that the largest single administrative cost—32% of the total—is the fee that Oxfam pays to its headquarters as a regular part of any contract for general running costs unrelated to the programme. These amount to about 7% of the overall contract value for the DFID and CIDA contracts, i.e. about \$352,000 in total. The value is high because the standard percentage fee is applied to the value of the cash transfer itself as well as to the operational costs. However, the inclusion of this sum obscures the real cost of delivering the emergency cash transfer in Somalia. The right-hand pie chart in Figure 10 therefore presents the administrative costs without the fee to Oxfam headquarters.

Figure 10: Distribution of administrative costs, with and without fee to Oxfam headquarters (% of costs)

Source: OPM. Note: The left-hand pie chart matches the breakdown shown in Table 6 above (activities that appear as both one-off and recurrent costs have been combined). The right-hand chart shows the same data after the fee to Oxfam has been excluded.

The one-off costs of setting up the programme were made considerably cheaper by Oxfam's decision to select a manual rather than electronic payment mechanism. The use of a payment mechanism familiar to everyone reduced the expenditure—and, crucially for the famine context, the time—spent on designing a new payment method and training the implementing partners. Moreover, it saved more than \$200,000 that might otherwise have been needed to purchase mobile phones for every recipient²⁵. Much of the other one-off expenditure that occurred, such as telling communities in the IDP camps about the launch of the transfer and identifying beneficiaries, was unaffected by the choice of payment mechanism. Some of the factors that determined the cost of one-off activities included the following:

- **Design.** The relatively light design costs—largely staff time, with some provision for office running costs and travel—were driven in part by the urgency of the response, which meant the programme was set up within a few weeks. It drew on Oxfam's experience of implementing food security projects previously in south-central Somalia. This was made easier because analysis for key design parameters, such as the minimum value of food and non-food items required to support an average household, had already been calculated by another agency.
- **Targeting.** Oxfam spent an estimated \$63,000 on informing the IDP camps about the transfer and identifying and registering beneficiaries. Much of the costs are for the time and expenses of Hijra's personnel in the field; the other major line item was the printing of programme identity cards. This activity was quite modest as a proportion of the project's overall running costs (6% of the total) since the programme's large scale, reaching about 12,500 beneficiaries with several transfers each, meant that the investment was less substantial than the necessary costs of distributing the transfers. Costs might have been lower still if the time spent registering beneficiaries had not been extended owing to security incidents (Oxfam, 2012c).
- **M&E.** A considerable investment was made in M&E. Again, these costs are unrelated to the choice of payment mechanism. Oxfam commissioned independent evaluations for each of its funders. The organisation was also one of the six initial beneficiaries of the very large M&E programme funded by UNICEF for the Cash and Voucher Monitoring Group, during which monitoring instruments were designed, and an impact evaluation of the whole response to the famine was undertaken.

With respect to recurrent activities, too, much expenditure is unrelated to the choice of manual transfers vs. e-transfers. In the area where the payment mechanism does affect the cost, that of disbursement, the use of *hawala* agents poses additional expenses compared with mobile money.

²⁵ Assuming \$17.50 per phone, as in Oxfam's E-cash pilot, for the 12,548 beneficiaries.

- The largest **disbursement** costs are the cost of Oxfam and Hijra overseeing implementation, and the commission to the *hawala* agents for handling the transfers:
 - Staff time is the main area where savings are made when using mobile money because there is no need to have staff on the ground overseeing the distribution process at the paypoints each month or doing office-based work to reconcile the lists of payments. It is estimated that Oxfam and Hijra spent in the region of \$150,000–\$200,000 of staff time and associated non-salary resources supervising disbursement of the cash, of which part would have been spent even under a mobile money programme, such as to manage the accounts and to run the hotline for queries.
 - The commission to *hawala* agents was eventually agreed upon at 2.5% of the transfer value, leading to a total of about \$120,000. The figure was a compromise between the 1.5% originally agreed, and the 7% that the money transfer agents requested after the programme had begun, once they realised the size of the task. It had quickly become apparent that they would need to open up additional temporary paypoints, and on days when they were normally closed, in order to handle the huge demand from over 12,000 additional people seeking payment at the same time as their regular customers. The large disparity in the proposed levels of commission suggest that the cost of disbursing a cash transfer through a *hawala* agent depends on the deal negotiated for each individual programme rather than on anything intrinsic to the payment mechanism. The final agreed value of 2.5% is roughly the same as the commission paid by Concern to its cash facilitator in Dubai for paying transfers into the account of mobile network operators in Somalia (see section 12 below), so this does not represent an additional cost of manual payment.
- Costs of **recurrent M&E**, such as the regular post-distribution monitoring and data analysis, are unaffected by the use of manual transfers; so, too, is the size of the percentage fee to Oxfam's headquarters.

We conclude from this case study of Oxfam's Emergency Cash Transfer response in Somalia that there would have been little difference in cost if the agency had run a programme of this size using a mobile-money payment system instead. The extra \$200,000 or so of staff time and resources spent overseeing the manual distribution would have been equalled by the amount spent on mobile phones for over 12,500 participants. The commission to the money transfer agents is equivalent to the commission to a cash distributor for paying mobile phone companies. Most other administrative costs, such as staff time for telling the community about the programme, identifying beneficiaries, and monitoring and evaluating the results, were unaffected by the payment mechanism.

In this case it is the context of the programme, rather than the cost, that determines the decision to use one payment mechanism over another. The need to respond very urgently to the major famine in 2011, when the first mobile network operator was only just launching its mobile money service in south–central Somalia and extra time would have been required for programme design and training partners, meant that the choice of the *hawala* agents was a favourable one.

II CASE STUDY 2: OXFAM'S E-CASH PILOT

II.1 THE PROGRAMME

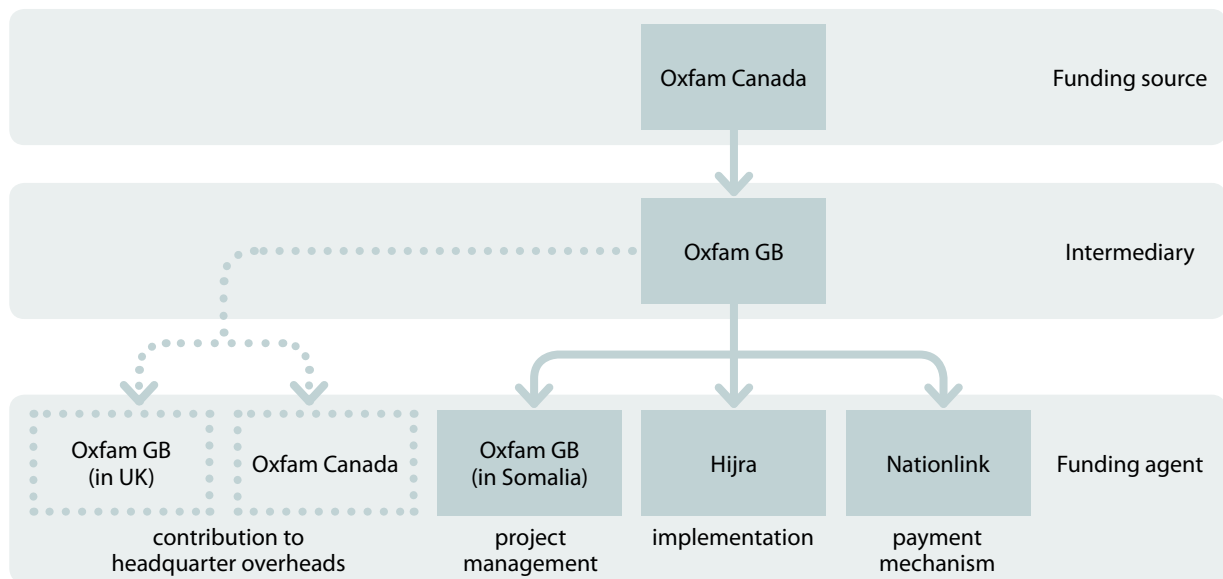
11.1.1 Programme objectives

Oxfam had been consulting with mobile network operators for some time about the feasibility of introducing a cash transfer payment by mobile phone. In mid-2012 it tested this for the first time when it gave a one-off payment of \$150 to 2,590 beneficiaries living in the vicinity of Mogadishu. Five hundred of these households were paid in cash through a bank, Salaam Bank; the other 2,090 were paid by mobile phone using Nationlink²⁶. The support was intended more to promote general improvements in well-being, enabling people to build assets, rather than as an emergency response to the famine which by then had been declared to be over. It was targeted at individuals who were self-employed or running small businesses. The payment was intended to enable shop owners and market traders to buy stock, repay business debts and leverage more borrowing; it was also intended to improve the assets of manual labourers and fishermen, though this proved to be more difficult (Aden, 2013).

11.1.2 Institutional arrangements

The E-cash pilot was funded by Canada and implemented by Oxfam and Hijra, the same local NGO partner that it had used during its Emergency Cash Transfer Programme (Figure 11). As before, a proportion of the contract value was returned to Oxfam's headquarters to cover general overheads.

Figure 11: Flow of funds for the E-cash pilot

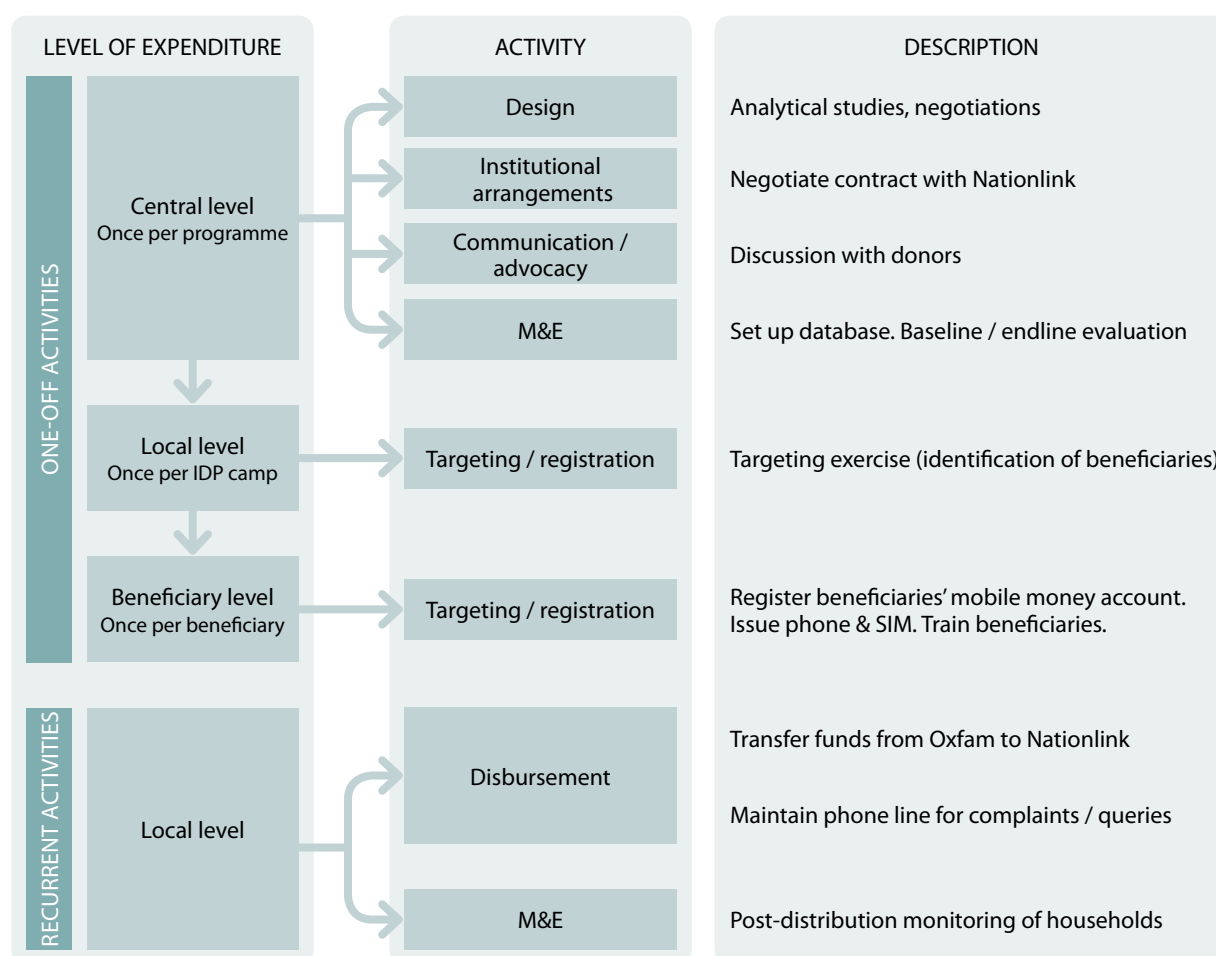


Source: OPM, from discussion with Oxfam.

Some of Hijra's tasks, such as identifying and enrolling beneficiaries, were equivalent to those under the manual programme (Figure 12). The main difference in their start-up activities was that part of the enrolment process entailed giving every beneficiary a mobile phone with a SIM card and setting them up with a mobile money account. Once the beneficiaries were registered in this way, however, their tasks were greatly reduced. Instead of having to oversee the disbursement of cash at a *hawala* agent, Hijra simply made some enquiries to check that beneficiaries had received the right amount. They had no further involvement in disbursement as the transfer was made remotely. Post-distribution monitoring was carried out as normal.

²⁶ The analysis in the remainder of this section looks only at the administration of the mobile phone payment to 2,090 beneficiaries, not the bank payment to the other 500.

Figure 12: E-cash pilot activities



Source: OPM, from discussions with Oxfam. Note: Here the 'recurrent activities' are those that would be repeated if more than one transfer were to take place. In the pilot they were only done once.

11.1.3 The outcome of the programme

Since the E-cash pilot was not intended purely as a food security measure its impact was not calculated by examining dietary diversity scores or changes in consumption. Instead the final evaluation looked at the project outcomes in terms of how the money was spent. This showed that, for shop owners and market traders, 75% of the cash (\$112.50) went on supporting their business and 25% (\$37.50) went on household consumption. For the manual labourers and fishermen the money was used differently because they could not easily translate the cash into investments into their business. They spent about 90% on food consumption and about 10% on their business (Aden, 2013).

11.2 THE COST OF IMPLEMENTING THE E-CASH PILOT

11.2.1 Total administrative cost

With a one-off payment of \$150 to 2,090 households the total disbursed was $2,090 \times \$150 = \$314,000$. The cost of delivering the programme is estimated at \$140,000, giving a total programme cost of \$454,000. This means that the key ratios for this pilot are:

Cost-transfer ratio	=	$\$140,000 / \$314,000$	=	0.45
Admin costs as % of total budget	=	$\$140,000 / \$454,000$	=	31%

The cost–transfer ratio means that it cost \$45 in administration to deliver every \$100 to the beneficiary. Since each beneficiary received a single transfer of \$150 the cost of delivering the transfer was \$67 per person.

Judging these costs against those of the Emergency Cash Transfer Programme from section 10.2 would not be a fair comparison. The bald figures indicate that the administrative burden of the E-cash pilot, proportional to the amount disbursed, was more than twice as much as the earlier programme (0.45 vs. 0.20) (Table 7). However, the analysis below shows how the value has been affected by the costs of investing in an innovative activity, as well as by the fact that there were fewer economies of scale, because fewer beneficiaries were enrolled and each beneficiary received much less money overall.

Table 7: Key parameters and costs for Oxfam’s Emergency Cash Transfer Programme and E-cash pilot

	Emergency Cash Transfer Programme	E-cash pilot
Parameters		
No. of beneficiaries	12,548	2,090
No. of transfers per beneficiary	6	1
Total no. of transfers	approx. 72,242	2,090
Value of transfer	75	150
Total received by beneficiary	450	150
Total costs (\$)		
Total amount transferred	5,568,000	314,000
Total administrative cost	1,124,000	140,000
Total expenditure	6,692,000	454,000
Ratios		
Cost–transfer ratio	0.20	0.45
Admin costs as % of total budget	17%	31%

Source: OPM, from discussion with Oxfam.

11.2.2 What the administrative costs were spent on

In contrast to the Emergency Cash Transfer Programme, the administrative costs for the E-cash pilot were weighted much more heavily towards one-off set-up costs, which consumed more than half of administrative expenditure, at \$79,000 (56% of the total) (Table 8). These look expensive because only one transfer was made: if six rounds of transfers had been distributed, the one-off component of the administrative expenditure attributed to each transfer would have fallen to around \$6 per transfer instead of \$38 (=38/6). Costs that would have been recurrent, had the programme issued more than one transfer, made up the remaining \$62,000. Any additional payment of \$150 that might have been made would have cost a further \$29 to distribute.

As was the case with the Emergency Cash Transfer programme, one of the largest components of the administrative cost of the e-cash pilot was the fee that Oxfam pays to its headquarters for the organisation’s general running costs. In this case the fee was set at just over 10% of Oxfam’s contract with CIDA (including the value of the grant itself), or nearly \$42,000 out of the \$140,000 administrative cost.

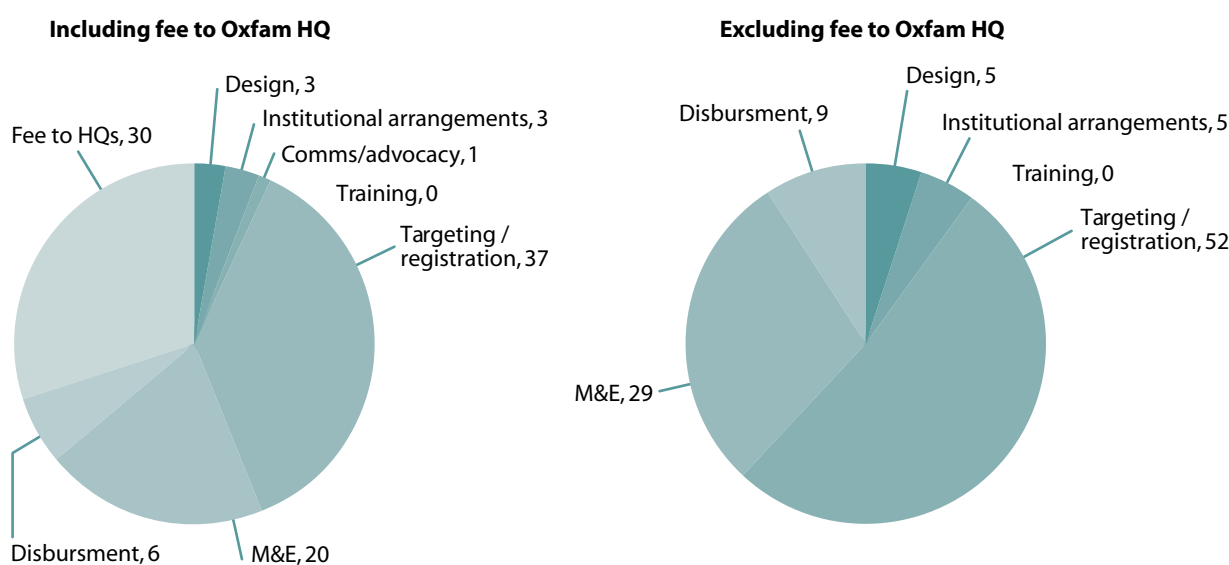
Table 8: Distribution of administrative costs by activity

Activity ¹	Cost (\$000)	Per \$150 transfer (\$)	Share of admin cost (%)
One-off activities	79	38	56
Design	4	2	3
Institutional arrangements	5	2	3
Fee to Oxfam HQ	11	5	8
Communication / advocacy	0	0	0
Training	<1	0	0
Targeting / registration	51	25	37
M&E	7	3	5
Recurrent activities	62	29	44
Disbursement	9	4	6
Fee to Oxfam HQ	31	15	22
M&E (recurrent)	21	10	15
Total	140	67	100

Source: OPM. Note: (1) 'Fee to Oxfam HQ' has been separated out from the 'Institutional arrangements' activity to distinguish it from other activities directly related to the contract.

11.2.3 Factors affecting the cost

To get an understanding of the costs of the activities undertaken to deliver the E-cash pilot it is useful to analyse the distribution of the \$98,000 of administrative expenditure excluding the fee to Oxfam. The right-hand chart in Figure 13 shows how these costs were spent.

Figure 13: Distribution of administrative costs, with and without fee to Oxfam headquarters (% of costs)

Source: OPM. Note: The left-hand pie chart matches the breakdown shown in Table 8 above (activities that appear as both one-off and recurrent costs have been combined). The right-hand chart shows the same data after the fee to Oxfam has been excluded.

We see here a very different distribution of administrative costs compared with those under the Emergency Cash Transfer programme that used the *hawala* agents for distributing the cash manually.

As far as *one-off* activities are concerned, the enrolment process, by which beneficiaries are identified, registered and set up with a phone account, has become a much more significant part of the overall cost, with over half of administrative expenditure being allocated to this activity. Some \$37,000 of this was the cost of buying a mobile phone and SIM card for every beneficiary, with the remainder being the time spent by Hijra staff and also some associated nonsalary costs such as programme identity cards.

In relation to *recurrent* activities we see that:

- Disbursement costs have shrunk enormously as a percentage of total expenditure, partly because there was only one disbursement round, and partly because there is no longer a need for the local NGO to spend several days in the field overseeing the distribution of physical cash. Instead the disbursement is made electronically and almost instantaneously by agreement between Oxfam and Nationlink from the office. All that remains at disbursement stage is a small amount of follow-up to check that people have received the funds they were expecting and to answer queries from beneficiaries.

In absolute terms, the disbursement costs of \$4 per transfer are the same as for the Emergency Cash Transfer Programme, but this is driven by the fact that there is only a small fraction of the number of beneficiaries amongst whom the general overheads such as the cost of a programme accountant are spread. If the programmes were of comparable size the E-cash pilot would become cheaper in this respect.

- The other recurrent costs of ongoing M&E and the fee to Oxfam's headquarters are unaffected by the choice of payment mechanism.

This case study confirms the findings from section 10 that the one-off set-up costs in Somalia of enrolling beneficiaries onto a mobile-money system and giving them a phone greatly exceed the one-off costs of a manual payment system such as using a *hawala* agent. On the other hand, the cost of disbursing each transfer is, as would be expected, cheaper when using mobile money. But that activity makes up a tiny proportion of all the administrative costs of running the programme. The savings made by a cheaper disbursement method in no way compensated for the much greater expense of buying a phone for every beneficiary for a single transfer. Other costs such as for post-distribution monitoring are the same regardless of whether the money is provided manually or by phone.

However, to judge the programme—and payment mechanism—negatively on the basis of its apparently higher administrative costs would be to miss the point entirely. These costs were necessarily high because the E-cash pilot was a trial in which the purpose was to hand out only one transfer per beneficiary in order to test how the mechanism could work. There was no opportunity for the high enrolment cost to be offset by numerous transfers. The lessons learned from the pilot were valuable in demonstrating the feasibility of using mobile-money payments for subsequent programmes such as those run by Concern Worldwide that are discussed next. This illustrates the important point that it costs money to be an innovator. For this reason cost alone should not be the determining factor in choosing a payment mechanism, since a programme that appears relatively costly when viewed in isolation may in fact be generating learning and savings for subsequent interventions.

12 CASE STUDY 3: CONCERN WORLDWIDE'S MOBILE MONEY PROGRAMMES

12.1 THE PROGRAMMES

12.1.1 Programme objectives

Like Oxfam, Concern Worldwide has been supporting households in Somalia for many years. During the famine of 2011 it initially focused its support on Bay and Lower Shabelle regions at the epicentre of the famine. However, after being expelled from these areas by Al-Shabaab in November 2011, its assistance shifted to Mogadishu, where Concern continued providing humanitarian assistance to IDPs and extremely vulnerable urban residents, for the purpose of improving food security. The programme has been funded by many different donors.

At the time of the famine its programmes provided aid in the form of food vouchers. Following feedback from beneficiaries this was topped up with cash starting from September 2012. Since Oxfam's E-cash pilot of mid-2012 had demonstrated the feasibility of using mobile money technology to distribute cash, Concern has exclusively used this technology for the cash component of its assistance over the past year. Food vouchers together with a small amount of cash were still provided until August 2013 (Figure 14). Three of Concern's programmes to date have provided mobile money alone, with no vouchers; these are highlighted in yellow in the figure below.

Figure 14: Concern Worldwide's cash and voucher programmes in Somalia, Oct 2012–Oct 2013

Funder ³	Payment			Duration of transfer and number of beneficiary households ^{1,2}	
	Voucher	Manual cash	Mobile money	2012	2013
DFID	✓		✓	2044 HH to end Jan; 2659 in Feb	
Irish Aid	✓		✓	1280 HH to end Feb	
Norwegian MFA	✓		✓	1907 HH to end Jan	
ECHO / Concern USA			✓		500 HH Nov 2012–Aug 2013
Concern USA	✓		✓		Variable no. of HH (905–1292), Feb–Jun
ECHO	✓		✓		2806 HH Mar 2013; 2406 Apr–Aug
IOM			✓		905 HH Mar–May
Irish Aid	✓		✓		900 HH Apr–Aug 2013
Norwegian MFA			✓		464 HH May–Oct

Source: Concern Worldwide. Notes: (1) Programmes in green use food vouchers and mobile money; programmes in yellow use mobile money only. (2) Total number of beneficiary households peaked at 5,731 between November 2012 and February 2013, then declined to 4,270 by August 2013. From September 2013 onwards only the Norwegian-funded project for 464 households is still disbursing cash. Further funding from ECHO for cash only is expected to be approved for a new project to start in October 2013 for 1,640 households. (3) DFID = The United Kingdom's Department for International Development. MFA = Ministry for Foreign Affairs.

The first programme in which Concern Worldwide provided a benefit to recipients exclusively through mobile money was part of its support to vulnerable households in five urban IDP camps and slum areas across three districts of Mogadishu during the post-crisis phase of the international community's emergency response to the famine. The grant, funded by the European Community Humanitarian Office (ECHO) and Concern USA under its 'Conditional Cash Programme', provided 10 monthly transfers of \$100 to 500 households between November 2012 and August 2013. Subsequently it has used this electronic payment mechanism for cash-only programmes on two more occasions: a three-month programme funded by the International Organization for Migration (IOM) from March to May 2013, providing \$80 per month to meet the basic food and non-food needs of 905 households in Mogadishu; and a six-month transfer of \$80 per month to 464 households in 2013, also with food security objectives, funded by the Norwegian Ministry for Foreign Affairs (MFA)²⁷.

Some of the distinguishing features of these cash-only programmes compared with Oxfam's E-cash pilot of a one-off payment of \$150 to 2,090 beneficiaries are:

- The much smaller number of beneficiaries. Each of the three cash-only programmes to date where Concern Worldwide has used mobile money have been targeted at a few hundred, rather than several thousand, households. They are smaller than their programmes that use mobile money alongside food vouchers, and are therefore not directly comparable in cost terms because they may not benefit from the same economies of scale.
- The duration of the benefit. The beneficiary households have each received several transfers rather than a single payment (up to 10 payments in the case of the ECHO / Concern programme). This is related to the programme objectives of meeting basic needs over several months.
- The value of the transfer. The payments of \$80–\$100 are similar to that provided by Oxfam under its Emergency Cash Transfer programme using hawala agents, rather than the \$150 paid under the E-cash pilot²⁸. Again, this relates to the programme's food security objectives. The value provided is within the range of the minimum basket of food and non-food needs for the average household.
- Conditionality. Concern agreed with ECHO to apply conditions to households for the mobile-money transfers under the ECHO / Concern USA funding. These mostly related to school attendance; for a few households transfers were conditional on attending a nutrition centre or cleaning their IDP camps. The cash transfers included in the programmes supported by IOM and the Norwegian MFA are unconditional.
- Implementation arrangements (see following subsection).

This study analyses the mobile-money programmes funded by ECHO / Concern USA and by IOM. The programme of the Norwegian MFA has not been included as it was still ongoing at the time of writing; the programmes combining mobile money with food vouchers have not been analysed as it was not possible to isolate the cost of the e-payment component.

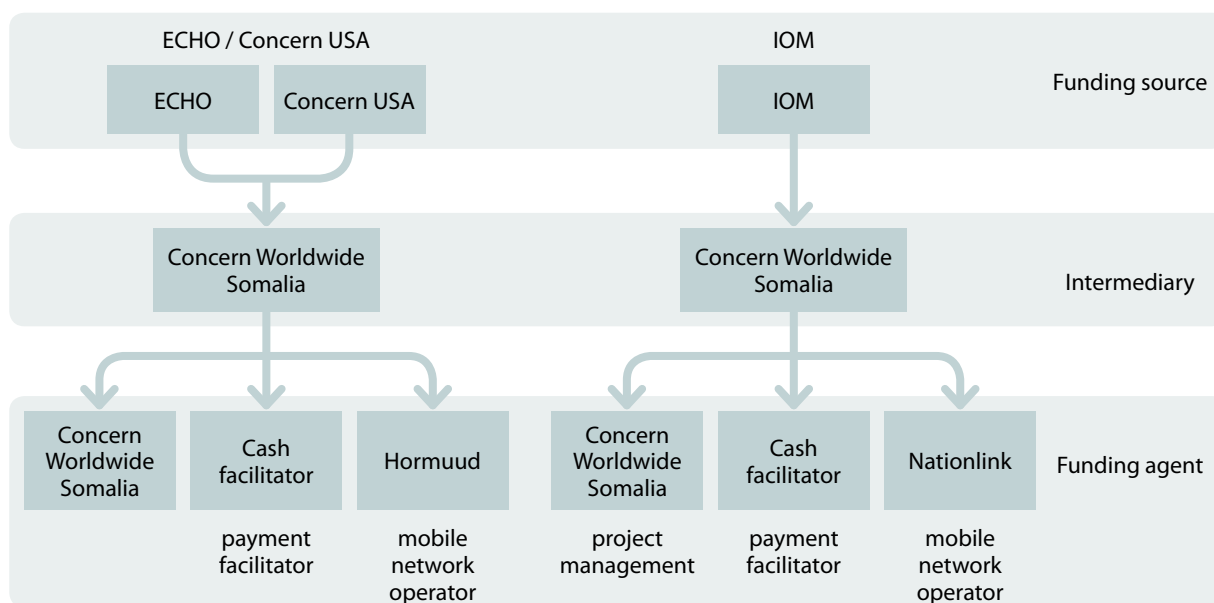
12.1.2 Institutional arrangements

The flow of funds for the ECHO and IOM programmes is very similar and is shown in Figure 15 below. Concern Worldwide uses its own staff in Somalia to run all its cash transfer operations rather than using a partner NGO. This includes activities such as registering beneficiaries and carrying out post-distribution monitoring. For its mobile money transfers it uses two different telephone companies, Nationlink and Hormuud, in order to spread risk and to maximise the acceptability of the programme among users of different mobile networks. It contracts the mobile network operators on a month-by-month basis rather than issuing a single contract for a whole programme. This gives the organisation flexibility to respond to unexpected events in the event of a change in political or security conditions where it is working, or in the ability of the network operators to deliver the transfer. It pays the transfer to Nationlink and Hormuud via a cash facilitator in Dubai since it cannot place the funds directly into a Somali bank account²⁹.

²⁷ The ECHO programme provided \$100 per transfer rather than \$80 as it was originally intended to be of shorter duration; it was subsequently extended, and the rate remained constant to avoid confusing or disappointing the beneficiaries.

²⁸ The cash top-up provided to recipients of the food voucher programmes is much smaller, at around \$25 per transfer.

²⁹ Oxfam, in contrast, took an alternative approach of paying their partners into bank accounts outside Somalia.

Figure 15: Flow of funds for Concern's mobile-money programmes

Source: OPM, from discussion with Concern Worldwide.

12.1.3 The outcome of the programmes

Post-distribution monitoring of the IOM and ECHO programmes indicates that the living conditions of beneficiary households improved by some measures over the course of their operations (Concern Worldwide, 2013, and OPM analysis of raw survey data). The average number of meals that households ate each day was nearly 2 at baseline; at the end of the three-month IOM project this had risen to 2.3 for adults and 2.7 for children, while by the end of the ECHO project it had increased to 2.5 for adults and 3.0 for children. Moreover the households also ate a more varied diet: among IOM beneficiaries the average number of different food groups consumed each day rose from about five—most commonly rice and other cereals, oil, spices and sugar—to eight at the end of the project, including greater consumption of fruit and vegetables. The share of consumption expenditure devoted to food remained fairly constant, at 61–63%, and there was not much other change in the distribution of household spending.

Concern also monitored the operational efficiency of the programmes. Under the IOM programme it found that all households successfully received the correct payment amount; two of the three payments were slightly delayed, though for reasons unrelated to the use of mobile money (the first due to late confirmation of the beneficiary list, and the second because of difficulties in transmitting the transfer sum via the cash facilitator). There was no indication of corruption or of beneficiaries being required to hand over a share of the transfer to any authority. The small number of complaints related mainly to mobile-phone-related queries such as lost SIM cards or errors arising when beneficiaries revealed their PIN codes to others.

Beneficiaries of the ECHO-funded cash transfer, too, were interviewed to ascertain operational outcomes. Similarly to the IOM programme, those interviewed after the final ECHO transfer in August 2013 all reported receiving the correct amount of \$100. Most (over 90%) declared that it was easy to receive the transfer by mobile phone, although one-quarter of respondents reported having had some problems with the technology and even more said they needed assistance to use it. About one-third of respondents are reported to have said they would have preferred to receive food or a food voucher. Beneficiaries appear to be getting used to using e-cash: by the time of the survey in August 2013 all respondents said that they had kept at least some of the transfer value electronically rather than cashing the entire sum out into hard currency. Some had faced challenges with reaching a place where mobile money could be used, or difficulties with network connectivity.

There is no comparison group by which we can ascertain whether the improvement in living standards of Concern's beneficiaries is due to the ECHO and IOM programmes or whether it reflects a general improvement in well-being in the population. However, the findings suggest that the cash transfer may have had a positive effect and that the mobile money mechanism has often, though not always, been well received.

12.2 THE COST OF IMPLEMENTING CONCERN'S MOBILE-MONEY PROGRAMMES

12.2.1 Total administrative cost

The larger and longer programme, the ECHO- / Concern-funded Conditional Cash Programme, distributed \$1,000 to each of its 500 beneficiaries over the course of 10 months (Table 9). It cost just under \$100,000 in operating costs to deliver the total of \$500,000 that was disbursed in transfers, giving a cost-transfer ratio of 0.18. This means that it took \$18 to deliver every \$100 to the beneficiary.

The follow-up, short IOM programme delivered a much smaller amount of benefit to a larger number of households, with 905 households receiving \$240 each. This programme reports very low administrative costs, at just under \$23,000 to disburse the \$217,000 of payments, giving it a lower cost-transfer ratio of 0.11, meaning that it took a modest \$11 to deliver every \$100 to the beneficiary. To summarise the key statistics:

ECHO / Concern Conditional Cash				
Cost-transfer ratio	=	\$92,000 / \$500,000	=	0.18
Admin costs as % of total budget	=	\$92,000 / \$592,000	=	16%
IOM				
Cost-transfer ratio	=	\$23,000 / \$217,000	=	0.11
Admin costs as % of total budget	=	\$23,000 / \$240,000	=	10%

Table 9: Key parameters and costs for the Conditional Cash and IOM-funded programmes

	Conditional Cash Programme	IOM
Parameters		
No. of beneficiaries	500	905
No. of transfers per beneficiary	10	3
Total no. of transfers	5,000	2,715
Value of transfer	100	80
Total received by beneficiary	1,000	240
Total costs (\$)		
Total amount transferred	500,000	217,000
Total administrative cost	92,000	23,000
Total expenditure	592,000	240,000
Ratios		
Cost-transfer ratio	0.18	0.11
Admin costs as % of total budget	16%	10%

Source: OPM, from discussion with Concern Worldwide.

12.2.2 Factors affecting the cost

The benefits of previous investment and larger transfers

In both these cases the ratio of administrative to transfer costs is lower than Oxfam's Emergency Cash Transfer Programme and E-cash pilot. Two factors are key here, neither intrinsic to the use of mobile money:

1. Previous investment. By the time these programmes were introduced both Concern and its partners, Nationlink and Hormuud, had had a few months' experience with using mobile money for cash transfers from their earlier projects that combined food with cash. No investment was required in designing procedures or training. Also, the programmes made use of the post-distribution monitoring questionnaires that had been designed under the UNICEF-funded support to the Cash and Voucher Monitoring Group, which further reduced the one-off programme design costs.
2. Larger transfers. We see here the benefit gained by disbursing larger total sums to each household compared with Oxfam's initial E-Cash pilot which made only a single payment of \$150 (intentionally, since it was piloting the methodology): the cost of setting up the programme and enrolling a beneficiary is spread across a larger total transfer value³⁰.

Differences between the Conditional Cash and IOM programmes

What drives the difference between the Conditional Cash Programme and the IOM programme? The breakdown of administrative costs is presented in Table 10 and Figure 16 below.

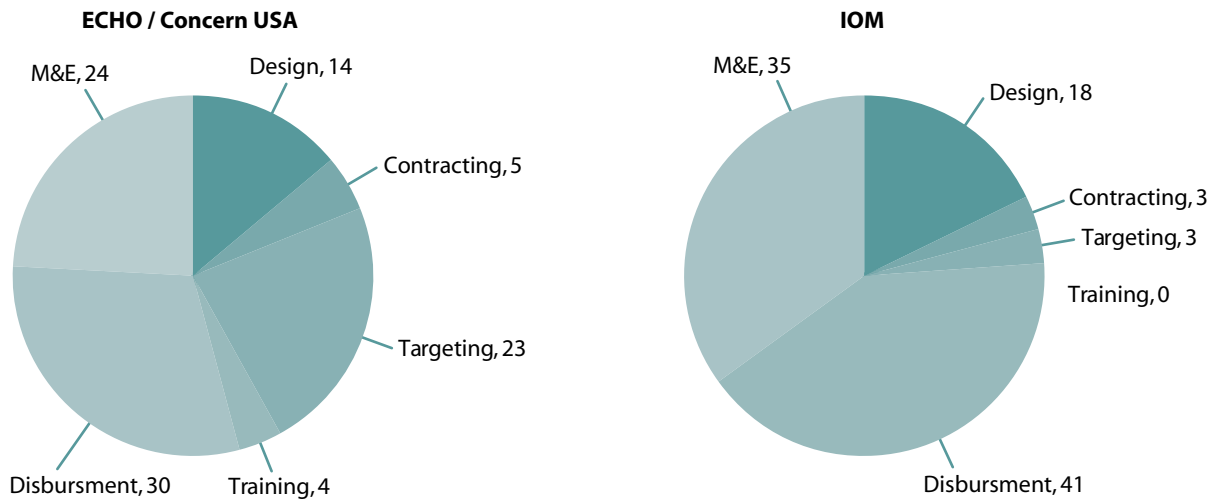
Table 10: Distribution of administrative costs by activity

Activity	Conditional Cash Programme			IOM		
	Total (\$000)	Per \$100 transfer (\$)	Share of admin (%)	Total (\$000)	Per \$80 transfer (\$)	Share of admin (%)
Design	13	3	14	4	2	18
Contracting	5	1	5	1	0	3
Targeting	21	4	23	1	0	3
Training	4	1	4	0	0	0
Disbursement	27	5	30	9	3	41
M&E	22	4	24	8	3	35
Total	92	18	100	23	8	100

Source: OPM, from discussion with Concern Worldwide.

³⁰ Note that it is the total sum disbursed, rather than the fact of there being multiple disbursements, that reduces the cost. Other things being equal, a transfer with multiple disbursements will be more expensive than one providing the same sum in a single tranche. There may be factors unrelated to cost that determine the number of transfers to be issued.

Figure 16: Distribution of administrative costs by activity



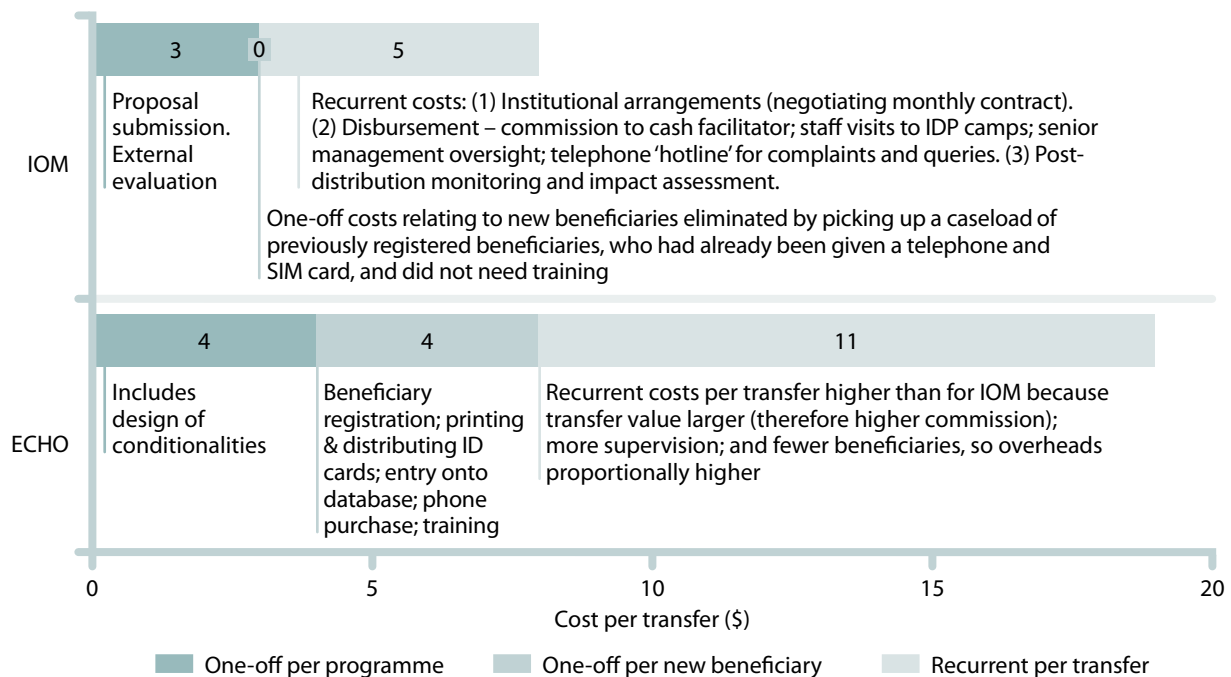
Source: OPM, from discussion with Concern Worldwide. Note: Data match the figures in Table 10 above.

We see that:

- For the Conditional Cash Programme, administrative costs are fairly evenly split between four tasks: (1) Targeting and registration of beneficiaries (2) Other design and set-up work (3) Managing the disbursement of the cash (4) Monitoring, analysing and reporting on the results.
- The design and start-up costs of the IOM programme are very much lighter, consuming less than a quarter of the administrative expenditure compared with nearly half under the Conditional Cash Programme. Most of the expenditure has been incurred on regular implementation, i.e. disbursing the cash and carrying out monitoring and evaluation activities.

The division of these administrative costs into activities that occur once only per programme and per beneficiary, and those that are repeated every transfer, is presented in Figure 17.

Figure 17: One-off and recurrent costs per transfer, by programme (\$)



Source: OPM, from discussion with Concern Worldwide.

The figures confirm the importance of previous investment for reducing the cost of running a programme. The IOM-funded work in March to May 2013 is a 'repeat prescription' from Concern's previous emergency cash transfer programmes. Little was required other than a few days to verify that the previous programme designs were still valid and to submit a proposal to the funder; then, once the contract was confirmed, to amend the existing contract with the network operator, Nationlink, to include the additional transfers. The IOM-funded project also eliminated all one-off costs relating to new beneficiaries by picking up the caseload that had been identified and registered under the support funded by DFID, Irish Aid and the Norwegian MFA in the previous phase of cash-and-voucher support that had finished in February 2013. All that was necessary in relation to the targeting process was for Concern to telephone or make a short trip to the IDP camps to inform the communities that transfers were to be restarted.

During disbursement the main costs for the IOM programme were the commission to the cash facilitator for transferring the funds to Somalia, and the visits by programme staff to the IDP camps before and after each payment, to make sure that recipients knew their money was due and to check afterwards that they had received it. This also included some senior management oversight, and the maintenance of a telephone 'hotline' for complaints and queries which received only a handful of calls each month. Post-distribution monitoring and impact assessment of households took place as usual, using the questionnaires that had been designed for the Cash and Voucher Monitoring Group consortium under a previous programme, with a slight variation to accommodate questions referring to the mobile money mechanism.

In comparison the Conditional Cash Programme, being the earliest of Concern's mobile-money-only transfers with a new caseload of beneficiaries, bore more of the initial start-up costs. There was a slightly longer design phase, during which the team had the additional task of going to the field to agree the most appropriate conditionalities for benefit recipients. The team undertook a two-week exercise to identify and register the most needy beneficiaries, then devoted further resources to preparing and distributing programme ID cards and inputting households' details onto a database. They also paid for mobile phones for every beneficiary, and held a training day where they explained how to use the mobile-money service.

The disbursement of the Conditional Cash proceeded on similar lines to the IOM transfer, including brief staff visits to the IDP camps before and after each payment, and a hotline to deal with occasional enquiries. The slight increase in cost of disbursement activities is due to the more frequent supervisory visits from senior staff during this longer time period, and higher commission per transfer to the cash facilitator because of the higher value of each transfer (the amount charged is a fixed percentage). M&E activities for the two programmes were more or less the same except that, with regard to monitoring the Conditional Cash Programme had a requirement for some verification of compliance with conditions; and in the evaluation the Conditional Cash Programme included a very light-touch review of the impact of the conditions on education outcomes. A more in-depth assessment of the impact of the conditionalities would have required a much greater investment of time and resources on M&E. Other differences in the recurrent cost of delivering the transfer are because the Conditional Cash Programme had fewer beneficiaries, so regular costs such as negotiating contracts and writing reports are proportionally higher.

There were also almost no costs to the beneficiary for participating in the programme. The mobile phones that they received have solar-powered chargers so do not require electricity. Once they had enrolled onto the programme they incurred no further time costs to collect the transfer because it was delivered directly to their phone, rather than to the money transfer agent which would have required them to travel and wait to collect it. There is also currently no charge to the customer of either network for sending, receiving or withdrawing cash from their mobile money account, because of the network operators' interest in attracting new customers.

PART D: CONCLUSIONS AND RECOMMENDATIONS

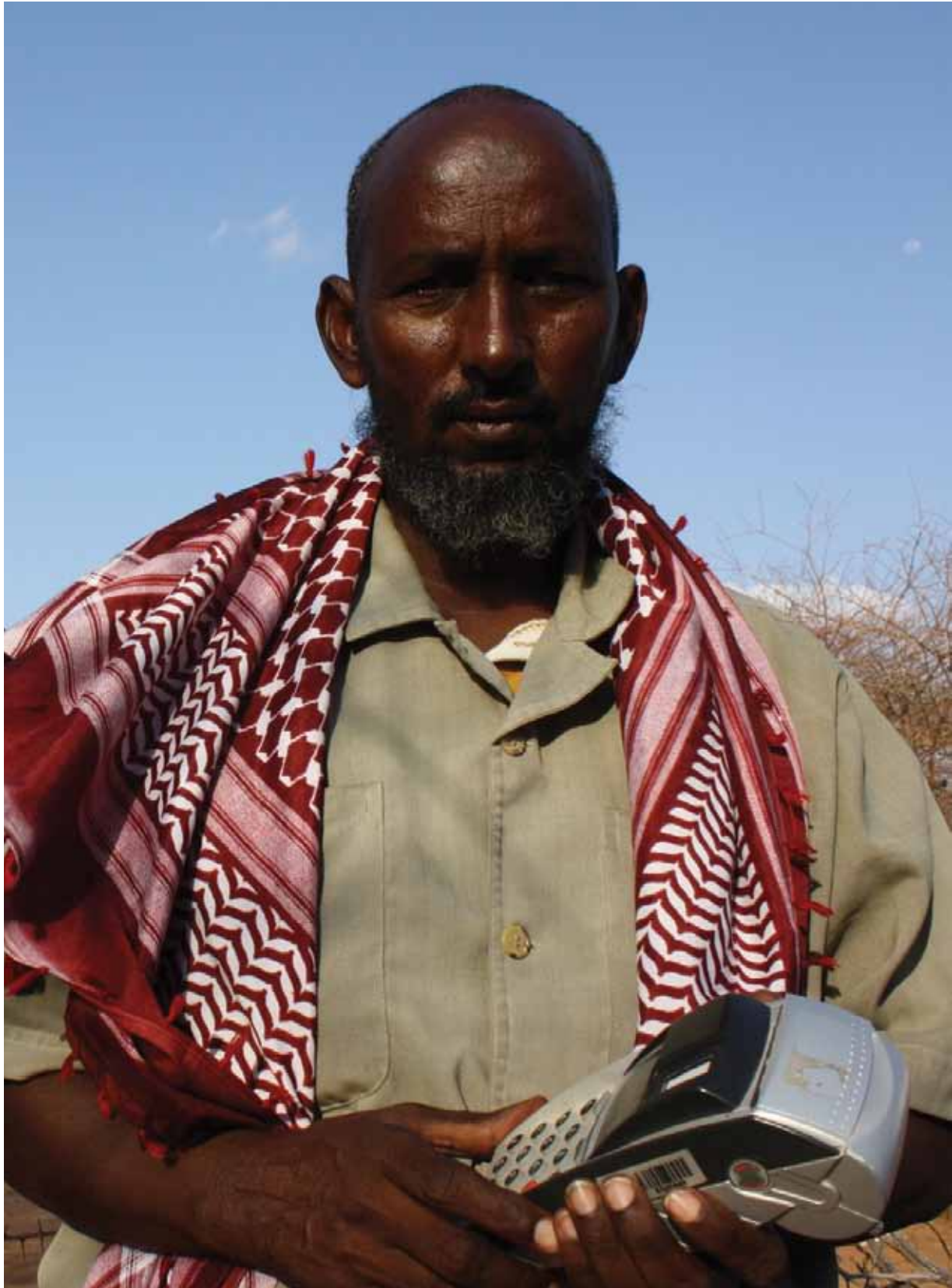


Photo: Anna Ridout /Oxfam

13 CONCLUSIONS

The findings of the case studies from Kenya and Somalia, together with the observations on recent e-transfer programmes elsewhere, lead to nine key conclusions about the cost-efficiency of e-transfers relative to direct manual payments.

1. Many costs of running an emergency cash transfer programme have little to do with whether an agency chooses an electronic or manual payment mechanism. Depending on the programme, these unaffected costs might include activities such as informing communities of the scheduled payment date, monitoring the impact of the payment on beneficiary households, carrying out an independent evaluation, and paying a percentage commission to the agency's headquarters for general overheads. As an example, in the case of SOS Kenya's programme with sQuid, up to 90% of the cost of some of the set-up activities were unrelated to the use of the smart card payment mechanism.
2. Of the costs that do depend on the type of payment mechanism, the evidence does not suggest that e-transfers are systematically cheaper or more expensive than manual transfers. The answer to the key research question, 'Are e-transfers more cost-effective than traditional manual-based cash delivery methods?' is therefore, 'Not necessarily':
 - In the cases studied the e-transfer schemes incur a much higher cost during programme start-up when this payment mechanism is first used, compared to a manual payment scheme, owing to the need to give beneficiaries the necessary hardware and software, especially for mobile phones.
 - Later, e-payment mechanisms seem to have reduced costs for the ongoing distribution of money compared with direct cash; but this is only a small proportion of overall expenditure (and may not even be the major component of recurrent expenditure, given other regular activities such as monitoring). It is only after several transfers that this reduction in recurrent costs is likely to start outweighing the heavier one-off costs. An emergency programme may not reach the point of this payoff until long after the emergency itself is over.
 - Since much of the costs of manual distribution are for staff time to oversee disbursement, a manual payment system could reduce its administrative costs simply by giving larger amounts of money in fewer transactions if that were appropriate for its objectives and if it did not compromise the security of the beneficiary.
 - In some instances e-transfers and manual payment mechanisms incur different costs that amount to about the same total. An example is the commission paid by Concern Worldwide to a cash facilitator for paying the transfers into a mobile network operator's bank account in Somalia, which is broadly the same rate as that paid by Oxfam to the *hawala* agents.
3. Many costs in any context, for any payment mechanism, are negotiated rather than fixed. We have seen this in the way that, in Kenya, sQuid offered a reduction on its usual transaction fee because it wished to test the experience of delivering emergency cash transfers, while in Marsabit district Concern and its partners negotiated a transaction fee separately with every merchant that disbursed cash to its beneficiaries. Similarly, in Somalia, the *hawala* agents for Oxfam's Emergency Cash Transfer programme initially proposed a commission of 1.5% of the transfer value, then advocated an increase to 7% on realising the scale of the task, then settled for 2.5%. Such negotiations can make a difference of tens or hundreds of thousands of dollars to the cost of running a programme.
4. Humanitarian agencies will therefore save money if they make their cash transfer proposition an attractive prospect for the payment provider. The negotiation of a good price depends on the value of the agreement to the payment provider. In Somalia the mobile network operators are willing for the time being to offer their mobile-money service for free—to all customers, not only to humanitarian agencies—because they see that it attracts new customers who are likely then to make paid telephone calls. The incentive of gaining new subscribers also contributed to the mobile network operators' agreement to offer phone handsets to cash transfer beneficiaries at a modest price. In cases other than Somalia, where implementing partners

maintained a low profile, a payment provider might be incentivised to contribute to a programme on account of the good publicity generated. Sometimes corporate social responsibility obligations can be the persuasive factor, as was the case for Safaricom's partnership with Oxfam in Kenya for the Urban Livelihoods and Social Protection Programme.

Conversely, a cash transfer programme that impedes the payment provider's ability to conduct its regular business or imposes additional demands, is likely to be charged a premium by the provider to compensate for the inconvenience. An example is the Emergency Cash Transfer Programme during the famine in Somalia that initially swamped hawala agents with hundreds of beneficiaries, preventing their usual clients from conducting their business until alternative arrangements were set in place.

5. The general state of infrastructure development in a country has a huge impact on the cost to an agency seeking to use e-payments for emergency programmes. The cost is driven by the state of the banking and communications infrastructure—electricity, mobile phone masts, national payment systems for bank cards—which has nothing to do with their use in emergency cash transfers. This is why a payment mechanism that is ideal in one country or district may be prohibitively expensive in another. We see the effect of this in the tendency towards the use of mobile money for emergency cash transfers in Kenya and Somalia, where that system is widespread while formal banking is limited, compared with the more common use of bank cards for cash transfers in other regions such as the Middle East and Asia.

Even within a country there can be disparities. In Nairobi, where mobile network coverage is good, an agency delivering a cash transfer by mobile money would pay only to register new people on the network, and perhaps the costs of mobile phone handsets or SIM cards. In northern Kenya, where systems are not functioning, the investment and recurrent costs are significantly larger, and perhaps prohibitive. An example of additional expenses—in both staff time and nonsalary costs—caused by poor infrastructure is illustrated by SOS Kenya who travelled repeatedly to Nairobi to load the transfer value onto beneficiaries' smart cards because the network signal that was needed was too poor in Marsabit.

6. It is possible for a humanitarian cash transfer programme to try to drive innovation in the development of the requisite national infrastructure but this is likely to be hugely expensive and risky and may take too much time in an emergency. SOS Children's Villages Kenya succeeded in using bank cards for its cash transfer programme, but only by paying for the POS devices that were installed in merchants' stores. But other experiments by emergency cash transfer programmes to be at the forefront of technological innovation have been terminated in locations where either the network infrastructure has been found to be unreliable (as for mobile tokens in Niger), participants have been too unfamiliar with the technology or agents have insufficient liquidity to deal with demand (as in the use of mobile money in Malawi). Being at the cutting edge of a technological development means that agencies may have to resort to using their contingency plans in the event that the intended payment method does not work. This might include, for instance, obliging mobile network operators to deliver cash by van as has happened in Malawi. This could prove more expensive than using a manual payment mechanism in the first place.
7. The amount of new activity required in any aspect of a humanitarian programme, not just in relation to its payment mechanism, is a key determinant of its cost. A programme that is designed from scratch, perhaps with new partners or in a new location, is necessarily more expensive than one that builds on a previous programme. One-off programme costs are reduced if an agency uses the same programme design, monitoring instruments, databases and trained local partners. Costs are further reduced if the programme uses the same beneficiaries, especially if they have previously been given equipment such as phones, SIM cards, bank cards or identity cards. We see the evidence from this in Concern Worldwide's IOM-funded programme in Somalia, which was delivered at relatively low cost because beneficiaries had already been enrolled and issued with phones under a previous intervention; and in Concern's manual-payment intervention in Kenya which also extended cash transfers to previously enrolled beneficiaries.

This means that if an agency's intervention is likely to be repeated, perhaps because it is operating in a location that has repeated crises owing to climatic or security conditions, its one-off start-up costs may eventually be spread over a much larger number of transfers than those under consideration in its initial programme. A programme with high start-up costs will become more cost-efficient with repeated use. This

has been found to be the case in Haiti where it is expected that e-payment systems that were put in place following the earthquake of 2010 will be used in future emergency situations.

8. There is a risk that if cost is the driving force in the selection of a payment mechanism then innovation of all types will be lost, because innovation costs money. This includes even activities fundamental to a cash transfer programme, such as registering new beneficiaries or moving to a new location. It was noted above that some of Concern Worldwide's e-transfer programmes in Somalia have been relatively cheap because they re-enrolled previously registered beneficiaries. An evaluation of the programmes of the Cash and Voucher Monitoring Group in Somalia in 2013 (of several agencies, not only Concern) observed that the essential activity of retargeting was not being done regularly because of operational difficulties, which would be liable also to have time and cost implications:

Targeting errors were [amplified] given rapidly changing food security conditions. Retargeting was essential. However, in most cases retargeting was not sufficiently prioritised by the organisation concerned because of the considerable operational challenges involved.' (Humanitarian Outcomes, 2013, p.110)

In contrast we have seen that Oxfam's E-cash pilot in Somalia has incurred a comparatively high administrative cost proportional to the value of the transfer it disbursed, because it was actively exploring an innovative technology. In relation to this Oxfam itself notes that,

Launching a product for the first time carries additional operational costs. [...] Early indications show that although initial costs might be high, they are not recurring and will naturally decrease over time. Beneficiaries will continue using the system thus increase their knowledge on it and the mobile network infrastructure in Mogadishu will continue growing leading to reduced implementation costs in the long run (Oxfam, 2012a, pp.7–8).

These higher administrative costs can therefore be desirable in certain contexts.

9. Together these conclusions mean that when an agency selects a payment mechanism, from amongst all those that are established in a given location, it is likely to be more appropriate to make the selection on the basis of the mechanism's non-financial merits rather than just on its cost. These non-financial reasons might include³¹:
- The speed with which the payment mechanism can be put in place;
 - The benefit to the recipient in terms of time and money saved not travelling or queuing for the money;
 - The increased security for both implementing partners and recipient households;
 - A reduced risk of fraud;
 - Ease of communication with recipients, not only for information directly related to the programme but also, in the case of mobile phone-based systems, for sending market price information, early warnings or health messages by text;
 - Improved dignity to recipients, who do not have to be seen to be queuing for handouts;
 - Improved financial inclusion for recipients in the longer run;
 - Secondary benefits to local markets.

³¹ See also e.g. Sossouvi (2013) for a more detailed discussion.

14 RECOMMENDATIONS

From these conclusions we therefore make the following recommendations for donors, aid agencies and payment providers:

1. Understanding the environment for e-transfers

Agencies considering the implementation of an e-transfer should explore the state of infrastructure development in the location—electricity, mobile network coverage, mobile phone penetration and ownership, formal banking including branchless banking—and consider whether any challenges can either be overcome at a price or whether they prohibit the use of the technology. Examples of key indicators that may guide a high-level understanding of the state of development of the infrastructure are presented in Table 11.

Table 11: Indicators of the state of development of financial service infrastructure

Financial service	Key indicators
Mobile money	Mobile penetration (no. of subscribers as % of population); mobile penetration annual growth; share of population with network coverage
Banking / branchless banking	No. of bank accounts; no. of bank branches, and annual growth; no. of ATMs; no. of POS terminals
Microfinance	No. of microfinance accounts

Source: NetHope (*pers. comm.*, 2013).

Global statistical data sources that may be of use include those provided by the GSM Association in respect of mobile phones, including their Mobile Money Tracker; the World Bank's Global Financial Development Report and its Financial Inclusion Database ('Global Findex') in relation to financial services; the statistics from the United Nations' Telecommunication Development Sector, ITU; and quarterly and annual reports from the relevant country's central bank and the agency responsible for communications³².

NetHope is drafting guidelines on how to do a market assessment. It has released two case studies (not exclusive to cash transfer programming) of market assessments for the use of mobile money in Tanzania and Uganda, while USAID have produced a similar study for Kenya (NetHope and MEDA, 2012 and 2013; Michaels, 2013).

Having understood the state of infrastructure development at a macro level the next step for the agency is to understand the capabilities and practices of each potential service provider that offers the payment mechanism. This includes, amongst other aspects, being clear what information is required to open an account; the reliability of the mechanism and the network infrastructure; how the provider manages liquidity; the controls that are in place to prevent fraud; and the process for record-keeping and monitoring. Guidelines on due diligence in selecting a payment provider are available from CaLP and NetHope (NetHope, 2013; Sossouvi, 2013).

2. Improving preparedness

- If donors and agencies consider that e-transfers make for effective delivery of aid, perhaps for reasons unrelated to the cost, it is important to think how to get the infrastructure established in areas prone to crisis. This was a recommendation of the CaLP study on new technology (Smith *et al.*, 2011). This is likely to be a task that requires collaboration not only among donors and agencies but also with government and the private sector. It may entail investment in innovation.
- Investing in disaster preparedness and contingency planning can overcome some of the costs associated with e-transfers. For example, framework contracts could be established with service providers (especially at the level of the cluster rather than per agency) that include clauses relating to stockpiling of necessary equipment; this could reduce part of the one-off start-up costs of e-transfers.

³² See eg. GSMA Association www.gsma.com/mobilefordevelopment and <https://mobiledevelopmentintelligence.com/>; Mobile Money Tracker at www.mobileworldlive.com/mobile-money-tracker; and UN ITU at www.itu.int/en/ITU-D/Statistics/Pages/default.aspx.

- Sensitisation for staff and beneficiaries as part of preparedness could reduce the time and staffing resource required for this during the programme implementation. This would be most effective if delivered at a large scale and should be institutionalised through government disaster preparedness mechanisms.
- Even if costs are not reduced significantly, advance preparation means that mechanisms that offer a number of benefits to agencies are not rendered unfeasible on account of time. In northern Kenya the long-term social protection programme in drought-prone areas, the Hunger Safety Nets Programme, is registering even non-beneficiary households onto its payment system with the intention that if these districts are hit with future droughts then affected households can receive support through the same mechanism. Such preparedness activity is an emerging area for which there is a cost; but benefits are anticipated in terms of the speed and coordinated manner in which the response can be provided to households.

3. Designing and implementing an e-transfer programme

- Consider whether and when the higher set-up costs associated with e-transfers will be offset by the reduction in recurrent costs of distribution. Take into account all costs, not just the purchase of hardware but also the investment in staff time to negotiate with payment providers, provide additional training, check that the distribution process is functioning, and deal with queries and complaints. If the payment mechanism seems uneconomical for a single programme, consider the possibilities for other programmes or other agencies to use the mechanism subsequently. One option might be to coordinate with long-term cash transfer programmes to use the same infrastructure. This may have a dual benefit: first, of spreading the start-up costs over a greater transfer value, and second, of reducing those costs if the increased weight of the larger programme enables the agency to negotiate a discount.
- Think how the attractiveness of the emergency cash transfer to the payment provider can be improved, since this can greatly reduce the transaction fee. In some cases it may be beneficial to group together in a consortium to offer the payment provider a larger pool of potential customers; in others it may be preferable to have a smaller number of beneficiaries so that the scheme remains manageable. At the time of writing the authors are aware of coordinated, cross-agency discussions with service providers being undertaken on new cash transfer programmes in the Democratic Republic of Congo, Malawi and, most recently, the response to Typhoon Haiyan in the Philippines.
- Don't assume that 'cheaper' means 'better value for money'. An agency may have to be the first to make an investment in a new technology in order for savings to be made in the long run. Programmes that repeatedly target the same beneficiaries will also be cheaper but may not be the most appropriate for achieving a programme's objectives.
- Cost is unlikely to be the primary reason for selecting one payment mechanism over another since so many programme costs are unrelated to the type of payment mechanism. It may be more appropriate to make the selection on the basis of other criteria such as the flexibility or security benefit for the recipient, or the possibility of using the technology for additional purposes such as monitoring and evaluation (see e.g. Sossouvi, 2013).

4. Improving the evidence on cost-effectiveness

- Agencies should aim to collect data on programme outcomes if they wish to identify the relative cost-effectiveness, rather than cost-efficiency, of different payment mechanisms. This is not the same thing as post-distribution monitoring, which can reveal the living conditions of households at the beginning and end of a transfer programme but which may not be able to attribute the change to the programme itself.
- One option for identifying the relative merits of the payment mechanisms might be to plan to use two different payment methods to respond to a humanitarian emergency, as was done by Concern Worldwide in Niger (Aker *et al.*, 2011). However, this kind of experiment is not always possible in an emergency context. Lessons may be able to be drawn from long-term social cash transfer programming, such as from Save the Children's and OPM's evaluation of mobile money, bank cards and manual payment mechanisms for Malawi's Social Cash Transfer programme, in progress.

ANNEX A : E-TRANSFER PROGRAMMES MENTIONED IN THIS RESEARCH

We present here a brief overview of the e-transfers mentioned in the study. Table A.1 summarises some of the factors that contribute to determining the cost of the seven case study programmes; Table A.2 lists some of the examples referred to in section 4 on recent global experience.

NB. Table A.1 should not be used to make a direct comparison of efficiency between programmes. As discussed in section 2.1.2 above, we cannot use the findings to judge whether one programme offered better value for money than another, because the contexts in which they operated are entirely different. Each case study should be considered as a standalone study.

Table A.1: Summary of case study programmes

Programme	Cost	Cost-transfer ratio	Admin as % of budget	Main factors increasing cost	Main cost savings
1 Nairobi Urban Livelihoods and Social Protection Programme Oxfam, Kenya, 2009–11 Mobile money	Transfer: \$565,000 Admin: \$361,000	0.64	39%	Factors unrelated to technology: <ul style="list-style-type: none"> • High communication / advocacy cost as programme set up with a view to long-term programme • Costs of leading consortium • Transfer value was relatively small (\$19) M-Pesa related factors: <ul style="list-style-type: none"> • High initial backstopping during disbursement because new technology 	M-Pesa related factors: <ul style="list-style-type: none"> • Enrolment costs lower than might have been expected for mobile money technology because many beneficiaries already had a mobile phone, so for them programme just bought SIM card • Backstopping costs during disbursement reduced over time
2 Marsabit Emergency Programme SOS Children's Villages, Kenya, 2011–12 Smart card (voucher + cash)	Transfer: \$1.39 million Admin: \$204,000	0.15	13%	Factors unrelated to technology: <ul style="list-style-type: none"> • Design costs large because this was SOS Kenya's first cash transfer programme. Set up office and systems from scratch • High communication / advocacy cost because programme wanted to show benefits of payment mechanism Card-related factors: <ul style="list-style-type: none"> • High recurrent costs of disbursement because staff had to step in when technology failed 	Factors unrelated to technology: <ul style="list-style-type: none"> • Transfer value was large (\$87), making the programme more cost-efficient Card-related factors: <ul style="list-style-type: none"> • sQuid / Paystream substantially discounted their services, especially the set-up costs. Transaction fees also amounted to a discounted 1% of transfer value
3 Marsabit County Emergency Response Programme (MRP) Concern Worldwide, Kenya, 2012–13 Manual cash through traders	Transfer: \$204,000 Admin: \$59,000	0.29	22%	Payment mechanism-related factors: <ul style="list-style-type: none"> • Identification of agents and negotiation of transaction fees took a lot of staff time • High transaction fees 	Factors unrelated to technology: <ul style="list-style-type: none"> • Design built on previous programme with same implementing partners, same office • Few resources spent on targeting

Programme	Cost	Cost-transfer ratio	Admin as % of budget	Main factors increasing cost	Main cost savings
4 Emergency Cash Transfer Programme Oxfam, Somalia, 2011–12 Manual cash through <i>hawala</i> agents	Transfer: \$5.57 million Admin: \$1.12 million	0.20	17%	Factors unrelated to technology: <ul style="list-style-type: none"> • Large investment in joint monitoring activities with other agencies • Payment mechanism-related factors: • Staff time to oversee manual disbursement of cash 	Factors unrelated to technology: <ul style="list-style-type: none"> • Low design costs (Oxfam and partner had used <i>hawala</i> agents before) • Economies of scale from reaching 12,500 households Payment mechanism-related factors: <ul style="list-style-type: none"> • No need to issue phones / cards at start-up
5 E-cash Pilot Oxfam, Somalia, 2012 Mobile money	Transfer: \$313,000 Admin: \$140,000	0.45	31%	Factors unrelated to technology: <ul style="list-style-type: none"> • Only one transfer per household Mobile money-related factors: <ul style="list-style-type: none"> • Purchase of phone and SIM card for every beneficiary 	Factors unrelated to technology: <ul style="list-style-type: none"> • Transfer value was large (\$150), making the pilot more cost-efficient Mobile money-related factors: <ul style="list-style-type: none"> • No need to oversee cash disbursement in field
6 ECHO Conditional Cash Concern Worldwide, Somalia, 2012–13 Mobile money	Transfer: \$500,000 Admin: \$92,000	0.18	16%	Factors unrelated to technology: <ul style="list-style-type: none"> • Small extra cost of imposing conditionalities • Monthly contracting of network operator 	Factors unrelated to technology: <ul style="list-style-type: none"> • Prior experience of using mobile money • Made use of the monitoring tools already developed • Economies of scale, because 10 transfers Mobile money-related factors: <ul style="list-style-type: none"> • No need to oversee disbursement of cash
7 IOM Unconditional Cash Transfers Concern Worldwide, Somalia, 2013 Mobile money	Transfer: \$217,000 Admin: \$23,000	0.11	10%	Factors unrelated to technology: <ul style="list-style-type: none"> • Monthly contracting of network operator 	Factors unrelated to technology: <ul style="list-style-type: none"> • As above, plus no retargeting of beneficiaries (therefore no phone purchase either) • No need for training

Source: OPM.

Table A.2: Examples of current and recent e-transfer programmes

Country	Date	Funder / agency	Programme name	Payment mechanism	Comment
Card-based systems					
Ecuador	2010	World Food Programme		Card	The World Food Programme's pilot programme delivered six monthly transfers of food, food vouchers or cash to poor Ecuadorians and refugee Colombians in two provinces. The value of the cash transfer was \$40 per month per household.
Lebanon	2013	Save the Children		Magnetic stripe card	Save the Children are providing cash to over 1,000 refugee households and host families in Tripoli, North Lebanon, in partnership with CSC Bank. The bank charges a fee of around 2% to Save the Children and to beneficiaries for recharging the card and for transactions.
Pakistan	2010	Government of Pakistan	Citizens' Damage Compensation Programme	Card	Programme provided unconditional cash transfers of about \$225 to over 1 million flood-affected households using the Watan Visa card in partnership with United Bank Limited (UBL). UBL already had a branchless banking platform, 'Omni'. Many programme beneficiaries were in rural households not yet connected to formal financial services. Programme incurred costs in enrolling beneficiaries and issuing bank cards.
Philippines	2011	ACF, funded by Spanish Agency for International Cooperation and Development		Card	ACF launched a EUR 200,000 cash transfer programme for relief to 2,300 flood-affected households, of whom 2,000 received food vouchers and the remaining 300 received the cash on a pre-paid debit card issued in partnership with Philippine Veterans Bank. This use of debit cards in an emergency response was the first for ACF International globally. Cards were issued in a region with good banking infrastructure and functioning local markets. Challenges of experimenting with these cards in an emergency context included needing time to pre-test the cards and support systems, and train staff, payment agents and beneficiaries.
Mobile-phone-based systems					
Cote d'Ivoire	2011	World Food Programme, ACF	Unconditional Mobile Cash Transfer	Mobile money	Programme provided \$132 in two instalments to 10,800 households in Abidjan, the main city of Cote d'Ivoire, following post-election violence. Transfer was delivered via MTN's mobile money system.
Malawi	2012	Concern Worldwide	Integrated Emergency Cash Transfer Response to the 2012–2013 food crisis	Mobile money	Concern Worldwide gave a transfer of MK 12,000 to 743 households from 17 villages in Salima district using Airtel Money as part of the response to the food crisis in 2012. The challenges of using this system in an environment where the mobile money system is not yet well developed, the mobile network is limited and beneficiaries prefer to cash out the value of the transfer are described in Oxfam's evaluation report (Oxfam, 2013).

Country	Date	Funder / agency	Programme name	Payment mechanism	Comment
Mali	2012	World Food Programme, funded by USAID / ECHO		Mobile tokens	Cash transfer programme in response to the food crisis. The programme began with two pilots, of 9000 and 7050 beneficiaries respectively. Beneficiaries received \$54 in Koulikoro and \$48 in Kayes via a mobile token delivered in partnership with Orange Mali. Because Orange did not already have branchless banking networks in the areas covered, it had to bring the money to the villages using mobile payment units. WFP paid \$1 for each SIM card issued plus \$2.60 for each transfer / cash delivery. Over and above these costs, WFP paid 3% of the total value transferred to beneficiaries to cover fees such as transport and logistics. The pilot was terminated after four months owing to difficulties of liquidity among Orange agents.
Niger	2012	World Food Programme	Urban Emergency Cash Transfer	Mobile tokens	From May to September 2012 the World Food Programme provided humanitarian relief during the lean season for over 1,000 households in three urban areas of Niger: Tillabery, Tahoua and Agadez. The monthly sum of 32,500 CFA per household was distributed using a mobile token which beneficiaries had to cash out at an agent of the mobile network operator, Orange. The token system was used because mobile money, whilst available in urban areas, is not commonly used. In Agadez the mobile token system was stopped after one payment owing to a lack of network connectivity. The World Food Programme considers that the network infrastructure in Niger is currently too poor to use mobile money outside the major cities, though it would have advantages in reducing the administrative burden of monitoring and reporting.

Source: OPM.

ANNEX B : TEMPLATE FOR COST-EFFICIENCY ANALYSIS

Agencies wishing to conduct a cost-efficiency analysis exercise on their own programme may find it useful to draw on OPM's costing template below, which formed the basis for the collation in Excel of data for each of the case studies presented in this report³³. Accounting records were used to fill in the first set of columns, identifying expenditure under each donor. In the second set of columns these figures were then reassigned according to the agency that spent the funds. In the third set of columns agencies divided the funds by the activities on which the item was spent.

Table B.1 Example of OPM's template for cost-efficiency analysis

Line item [Examples]	By financing source (who pays?)			By financing agent (who spends?)			By activity						
	Donor 1	Donor 2	Donor 3 [...]	Partner 1	Partner 2 [...]	Grant to beneficiaries	Design	Institutional arrangements	Comms. / advocacy	Targeting / registration	Training	Disbursement	M&E
Personnel													
Manager	\$x		\$z	\$x+z			[50%...]	[10%]	[5%]			[10%]	[20%]
Field officer...	\$x				\$x								
Transport	\$x		\$z	\$x	\$z								
Communication	\$x			\$x									
Printing	\$x				\$x								
Office costs	\$x		\$z	\$x	\$z								
Commission	\$x			\$x									
Management fee	\$x	\$y		\$x+\$y									
[...]													
Grant to beneficiaries		\$y				\$y							
TOTAL	\$X	\$Y	\$Z										

Each set of columns adds up to the same total (except no grant value in the 'activities' section)

Source: OPM.

³³ Please refer to OPM's website for a working paper describing the research method in more detail. This is planned for release in early 2014.

ANNEX C : LIST OF RESPONDENTS

C1 Somalia case studies

Name	Job title	Organisation
Sarah King	Emergency programme manager	Concern Worldwide Somalia
Harbi Nur	Field coordinator	Concern Worldwide Somalia
Abdirizak Ido	Chief Executive Officer	Nationlink Telecom
Ismail Sheikh Adan	Programme manager, Mogadishu and Lower Shabelle	Oxfam
Ahmed Ibrahim Abdi		Oxfam
Harrismus Nzavi	Finance officer, South Sudan (formerly Somalia)	Oxfam
Olivia Collins	Social protection specialist	UNICEF Somalia
Kerren Hedlund	Independent consultant (led external evaluation of famine response for Humanitarian Outcomes)	n/a
Mike Brewin	Freelance consultant (led M&E technical assistance for the Cash and Voucher Monitoring Group)	n/a

C2 Kenya case studies

Name	Job title	Organisation
Bessie Nikhozi	Assistant Programme Manager	Concern Worldwide Kenya
Leina Mpoke	Programme Manager	Concern Worldwide Kenya
Amina Abdulla	Programme Manager	Concern Worldwide Kenya
Edwin Thumbi	Project Finance	Concern Worldwide Kenya
Moses Babai	Project Accountant	Concern Worldwide Kenya
Sumananjali Mohanty	Programme Manager	Oxfam
Joseph Kajwang	Deputy Director	SOS Children's Villages Kenya
Anthony Githui	Finance Manager	SOS Children's Villages Kenya

C3 Other contributors

Information on other recent e-transfer programmes and the local context was kindly provided by: Tanjona Andriamarolaza (WFP Mali), Leila Bourahla (Concern Worldwide, Niger), Joanna Buckley (OPM), Simon Clements (WFP, Headquarters), Giorgi Dolidze (WFP, Niger), Joanna Friedman (Action Against Hunger, USA), Karl-Friedrich Glombitza (Swiss Agency for Development and Cooperation, Lebanon), Jerry Grossman (OPM), Cheryl Harrison (WFP, Kenya), Demos Militante (ACF), Franck Muller (WFP, Mauritania), Johnathan Napier (Concern Worldwide, Malawi), Daniel Nyabera (Action Against Hunger, Kenya), John Nyirenda (Save the Children, Malawi), Nichola Peach (WFP Somalia), Isabelle Pelly (Save the Children, Lebanon), Margaret Rehm (WFP regional office, Senegal), Emmeline Saint (Oxfam, Malawi), Kokoévi Sossouvi (independent consultant), Nicolas Syed (CaLP, Niger), Levan Tchachua (WFP Turkey).

We are also grateful for valuable comments on earlier drafts, which we received from the following people in addition to those listed above: Nupur Kukrety (Oxfam), Hamilton McNutt (NetHope), Sara Murray (MercyCorps), Sasha Muench (MercyCorps), Chloe Puett (Action Against Hunger).

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ANNEX E : TERMS OF REFERENCE

Responsible	Lili Mohiddin CaLP Technical Coordinator
Date	2nd November 2012
Subject	Cost effectiveness of electronic payment compared to traditional methods

Background:

The research builds upon previous collaboration between the Cash Learning Partnership (CaLP) and Visa and will focus specifically on the area of technology and electronic cash transfers. This research takes forward recommendations made in the 2011 CaLP research 'New Technologies in Cash Transfer Programming and Humanitarian Assistance'³⁴ (Smith *et al* 2011) and was a key area identified by the CaLP community of practice through an online survey in the summer of 2012.

Cash transfer programming (CTP) in the humanitarian sector is becoming increasingly recognised as an effective intervention in emergency contexts, with a noticeable increased uptake of CTP in programming in recent years. From 2007 to 2010, humanitarian aid spending on CTPs, increased from US\$1.8 million (0.7%) to US\$52 million (25.9%)³⁵. This has, in part, been enabled by the advances in, availability and uptake of appropriate technology (such as electronic transfers), even in the most remote and insecure areas.

It is thought that context depending, cash transfer programmes (CTP) are more cost effective than in-kind distributions, despite a lack of extensive evidence based research. In addition, less clear and unsubstantiated are the factors that influence cost effectiveness of different cash programme modalities– including those using electronic transfers. The CaLP New Technologies research touches on cost effectiveness, and felt that “more evidence is required to fill critical gaps in the business case for use of new technology in humanitarian contexts.” The research highlights that aid agencies have not yet undertaken detailed cost comparison studies and there is need for more research on cost effectiveness of electronic versus manual based systems, as well as the wider social impacts of increased utilization of technology (which should be part of the cost-effective analysis).

Key recommendations from this research would be applicable to the private sector, policy and decision makers and humanitarian actors (UN, NGOs, National Governments, Donors etc). The recommendations will be used in response analysis, programme design, contingency and preparedness planning as organisations are increasingly requested to ensure their responses are cost-effective. Indeed, scrutinising cost-effectiveness of potential responses is becoming an integral part of response analysis.

What is cost-effectiveness? (Hodges *et al* 2011³⁶)

‘Cost-effectiveness should be calculated where benefits can be quantified but not necessarily expressed in money terms. Analysis of cost-effectiveness goes far beyond the limited realm of cost-efficiency by attempting to measure costs against the outcomes and impact of programmes, in other words the results they are ultimately intended to deliver. This gets to the heart of “value for money”, making it possible to choose rationally between programmes or variants in programme design on the basis of the relative cost of achieving desired social and economic results.’

Research question:

Key question: Are electronic transfers more cost effective than traditional manual based cash delivery methods, and under what conditions?

Related questions to address:

- What factors (internal and external, enabling and disabling, including social) influence the cost effectiveness of electronic transfers? Are some factors more influential than others? If so, what are they (listing the top 3 for each type of factor)? For example; does beneficiary financial illiteracy decrease cost effectiveness? (Such factors should be discussed and agreed with the TWG and CaLP during the research.)

³⁴ CaLP website.

³⁵ Global Humanitarian Assistance, Briefing: Tracking spending on cash transfer programming in a humanitarian context, March 2012: <http://bit.ly/N8vnm>.

³⁶ Anthony Hodges, Philip White and Matthew Greenslade 2011; Guidance for DFID country offices on measuring and maximising value for money in cash transfer programmes, Toolkit and explanatory text' www.dfid.gov.uk/Documents/publications1/guid-dfid-cnty-offs-meas-max-vfm-csh-trsfr-progs.pdf

- With regards identified disabling factors, and considering the CaLP 'Ready or Not'³⁷ research findings, are there additional factors that require addressing to 'unplug' these blocks? What affirmative actions are needed from organisations at policy/systems, structures and HR level? Are there effective, replicable 'models' which improve cost-effectiveness and the factors within this?
- What questions relating to cost effectiveness should decision makers ask when considering electronic transfers? Could these questions be incorporated into a decision tree?
- What should UN agencies (and NGOs) consider when institutionalising cash that could result in more cost effective electronic transfers?
- What are the key recommendations and advocacy messages for various stakeholders?

Proposed methodology:

1. CaLP establishment (with input from the researchers/ consultants) of a Technical Working Group (TWG) that would be used to assist in the fine tuning and guidance of the research and support access to key documents and contacts, and review of outputs).

The TWG is critical to this process as CaLP is aware that this piece of work requires technical rigour and neutrality. This group should contain experienced technical staff and must contain at least one academic/ representative of a research institution/ think tank (irrespective of the successful candidate is him/herself described as such).

In addition, the researchers/ consultants should note that the Technical Working Group (TWG) will be undertaking an aligned piece of work that aims to: (a) develop guidelines in utilising electronic transfers to ease their uptake, and (b) develop codes of conduct in data protection and management. Additional information is available on request.

2. A desk review of recently published/ grey literature, and where necessary key informant interviews and meetings with research bodies and academic institutions to gather data and insights into this question and to identify internal/ external, enabling/ disabling factors for greater consideration. This desk review would complement and build on the extensive review undertaken as part of the New Technologies research and should not duplicate it.

Attention to gender, urban, child headed-households and contexts of poor geographical access due to security constraints must be made.

3. Quantitative and qualitative analysis of 4 emergency cash programmes (with a representative sample of both manual and electronic transfers and in addition to the programmes referenced in the New Technology paper) in the last 5 years to answer the research questions listed above.

Access to data will require early engagement and agreement with a number of agencies in the pre-disaster phase. Not only will this ensure access to key data but also consistency in methodological approaches such as the use of control manual transfers for a pre-agreed percentage of the beneficiary population. There are a number of initiatives globally that could be harnessed to facilitate this process. Where possible, the CaLP will lead and assist the researcher/ consultant in accessing such initiatives and shall seek commitment from the CaLP steering committee agencies and community of practice organisations.

4. Conclusion should answer the research question; provide recommendations on improving cost effectiveness of electronic transfers and, actions related to institutionalisation activities that will enhance cost effectiveness.

Please note:

This ToR covers the main focus of this research. Additional 'guidance' or 'reference' documents may be developed by either CaLP or the contracted consultant/ research body to ensure a satisfactory understanding of the task and the outputs expected.

³⁷ See CaLP website.

Outputs:**Key outputs and Way of Working:**

1. A research design to be presented to an external Technical Working Group and CaLP technical coordinator at an inception meeting (this can be virtual, but face to face is ideal and will be sought).
2. Short monthly progress reports to the Technical Working Group to ensure their ability to support and guide where necessary.
3. A full research document with conclusions and recommendations.
4. A short document outlining key messages and recommendations for NGOs (especially management and decision makers), other organisations, and donors funding CTP market based responses and humanitarian coordination groups. This would be used for advocacy and awareness raising needs.
5. Present research findings at a CaLP Learning Event or similar event

Management:

This research is being commissioned by Oxfam GB on behalf of the Cash Learning Partnership (CaLP). The CaLP Technical Coordinator will manage the consultant/s for this assignment. An interagency reference group will be set up by CaLP to provide technical oversight to the research.



The Cash Learning Partnership

Led by Oxford Policy Management (OPM) with support from Concern Worldwide, this research aims to answer the key question: Are electronic transfers more cost-efficient than traditional manual based cash delivery methods, and under what conditions?

Cash is increasingly offered to households in humanitarian emergencies as an alternative to in-kind aid. Under certain conditions cash may have advantages over other instruments, such as greater acceptability, utility and flexibility for people affected by disasters. There is now widespread interest in the additional benefits from delivering cash using technology such as mobile phones or electronic bank cards-'e-transfers'-rather than manually. However, several barriers have impeded the take-up of the technology, of which one is their cost.

The Cash Learning Partnership (CaLP) commissioned this research to find out more about the cost of using electronic payment mechanisms (e-payments) for emergency cash transfers. The research draws on case studies of two countries, Kenya and Somalia, analysing the cost-efficiency (and where possible information on cost-effectiveness) of seven emergency cash transfer programmes implemented between 2009 and 2013: four using mobile money, one using a smart card and two using a traditional manual distribution method. It shows the administrative cost of delivering the cash transfer, broken down by activity (designing the programme, registering beneficiaries etc.), and identifies the factors that improve or decrease overall cost-efficiency.

This research was commissioned by the Cash Learning Partnership (CaLP),
with the generous support of VISA Inc.

