PROGRAM KELUARGA HARAPAN PAYMENTS THROUGH ALTERNATIVE CHANNELS: STRATEGY AND KEY REQUIREMENTS

MICHAEL JOYCE, BRIAN LE SAR, JOHANN BEZUIDENHOUDT, BRENDAN AHERN
AND DAVID PORTEOUS

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Program Keluarga Harapan Payments through Alternative Channels: Strategy and Key Requirements

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December 2014

ABSTRACT

Program Keluarga Harapan (PKH) is a Conditional Cash Transfer programme that delivers benefits to 2.3 million families in Indonesia. Payments to these families are currently made through a manual process involving the Indonesian Post Office. This paper discusses the opportunities and considerations in evaluating alternative payment mechanisms and recommends a strategy for moving to payment methods that are more efficient for the programme, easier to access for beneficiaries and provide the potential for financial inclusion through savings accounts or other financial instruments such as pre-paid cards or mobile money.

This strategy would involve an evolutionary process that must address not only payment technology issues, but also a shift from a "managed" disbursement process, whereby beneficiaries rely heavily on facilitators in order to access their benefit funds, to a "self-service" process, in which beneficiaries are able to select the most appropriate time, place and method to access their funds. The paper also proposes key principles and a requirements matrix to be considered when selecting payment mechanisms.

1 The analysis and interpretations presented in this paper are those of Michael Joyce (michael.joyce@tnp2k.go.id), Mobile Money Specialist at Cluster 3 Working Group TNP2K; Brian Le Sar, Director at Bankable Frontier Associates (BFA) and the Chief Executive Officer of the National Payments System Institute; Johann Bezuidenhoudt, Senior Associates at BFA; David Porteous, Managing Director at BFA and Brendan Ahern, an Associate at National Payments Systems Institute (South Africa).

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Abbreviations

ATM	*anjungan tunai mandiri* (automated teller machine)
Bappenas	*Badan Perencanaan dan Pembangunan Nasional* (National Development Planning Agency)
BFA	Bankable Frontier Associates
BI	Bank Indonesia
BPR	*Bank Perkreditan Rakyat* (people's credit bank)
BRI	*Bank Rakyat Indonesia* (People's Bank of Indonesia)
CICO	cash-in/cash-out
CPSS	Committee on Payment Systems of the International Bank of Settlement
DFID	Department for International Development (UK)
DMS	disbursement management system
EDC	electronic data capture
EFT:	electronic funds tranfer
e-KTP	electronic Indonesian identity card
G2P	government to person
Giro-POS	account-based payment service available at post offices
GoI	Government of Indonesia
IDR	Indonesian rupiah
Kemensos:	*Kementerian Sosial* (Ministry of Social Affairs)
KTP	*kartu tanda penduduk* (Indonesian identity card)
KYC	Know Your Customer
MIS	management information system
MNO	mobile network operator

MSISDN	mobile station international subscriber directory number
NGO	non-governmental organisation
NPS	national payments system
OIBM	Opportunity International Bank Indonesia
PIN	personal identification number
POS	point of sale
POS-Wesel	remittance service provided by the Indonesian post office (PT POS)
PSP	payment service provider
PT.POS	Indonesian post office
PKH	*Program Keluarga Harapan* (Conditional Cash Transfer Programme for Poor Families)
RTGS	real-time gross settlement
SKNBI	Indonesian national clearing system
SIM	subscriber identity module
SMS	short message service
TN2PK	*Tim Nasional Percepatan Penanggulangan Kemiskinan* (National Team for the Acceleration of Poverty Reduction)
UP-PKH	*Unit Pelaksanaan Program Keluarga Harapan* (the implementing unit for the Conditional Cash Transfer Programme for Poor Families, under the Ministry of Social Affairs)

Executive Summary

The *Program Keluarga Harapan* (hereafter referred to as PKH or "the programme"), launched in 2007 as part of the Government of Indonesia's (GoI's) national poverty reduction strategy, provides conditional cash transfers to poor and ultra-poor households in Indonesia. The government planned to expand the programme to 2.3 million recipients by the end of 2013 and 3.2 million by 2014 and wanted to build on lessons learned from the current system which incorporates manual transfers and electronic disbursements (still at the pilot stage). However, a 2013 report identified several areas for improvement within the programme's current method of disbursements. The implementing unit for the programme (UP-PKH), which is under the Ministry of Social Affairs, now faces the challenge of expanding the programme and selecting new payment providers at the same time.

The National Team for the Acceleration of Poverty Reduction (TNP2K) contracted Bankable Frontier Associates (BFA) to assist the implementing unit in developing a broader strategy for moving onto an electronic payments system and drawing up a requirements matrix highlighting minimum requirements for providers.

Under this assignment, two broad sets of options for a revised programme were drawn up which consider electronic payment. The assisted payment options depend on government officials or private providers delivering cash and so are, by definition, located near beneficiaries. By contrast, the self-service payment options would significantly improve reconciliation procedures, making them automated rather than performed at the conclusion of each payment cycle. Each approach has different advantages and disadvantages and needs to be measured against the key criteria for the scheme. The key element is that no single approach will resolve all of the issues in the short to medium term; multiple methods need to be used.

The pros and cons of the various options against these key criteria can be summarised as shown in Figure 1. (See the main report for a full discussion of the various paypoint options and how they rank against stakeholders' priorities).

Figure 1. Pros and Cons of Potential Options for a Revised PKH[2]

Location, Payment instrument Acquiring method ('Use...On...')	Expected costs	Reconciliation	Proximity	Extent of footprint	Operating hours/ flexibility around timing of cash-out	Leakage	Reliability and timeliness of payment
Pos Wesel Cash	◐	○	●	●	○	◐	○
Pos Giro cash	◐	◐	●	●	○	◐	○
BRI branch passbook over the counter	◐	◐	◐	●	○	◐	○
Assisted paypoint EDC card	◐	◐	●	●	○	◐	○
Assisted paypoint mobile phone cash van	◐	◐	●	●	○	◐	○
Assisted paypoint EDC bank card	◐	◐	●	●	○	◐	○
Mobile money agent mobile phone	●	●	●	●	●	◐	●
Bank agent mobile phone	●	●	●	●	●	◐	●
Bank agent Bank card EDC	●	●	●	●	●	◐	●
Bank branch Bank card EDC	●	●	◐	●	◐	◐	●
On/off-site ATM Bank card ATM	●	●	●	●	●	◐	◐
On/off-site ATM Token Number	●	●	●	●	●	◐	●

● Fulfills criteria ◐ Some issues ○ Does not fulfill criteria

[2] This diagram is intended to summarise the pros and cons associated with different means of payment within the Indonesian context. Since the first draft of this document, PKH has added another means of payment which is similar to POS Giro in that it is an assisted payment in cash. Relative to POS Giro, the new method features improved reconciliation, reliability and timeliness. With respect to operating hours and flexibility, though, it does not represent a significant improvement. We suggest that the pool of service providers needs to be expanded to enable a wider range of providers to participate. This aligns with the key principles discussed elsewhere in this document

The following core principles are recommended as a guide in designing the revised programme:

a. Leverage existing infrastructure as much as possible and ensure that the chosen solutions are fully integrated into the national electronic payments infrastructure. As new infrastructure and channels are developed, social benefits payments should be adapted to take advantage of the new infrastructure and channels.

b. Keep the system open. Avoid using proprietary (closed/unique) technology and open participation in the programme to as many service providers as possible.

c. Ensure multiple providers are used.

d. Align the chosen solution with global electronic payment standards.

e. Incorporate a focus on financial inclusion.

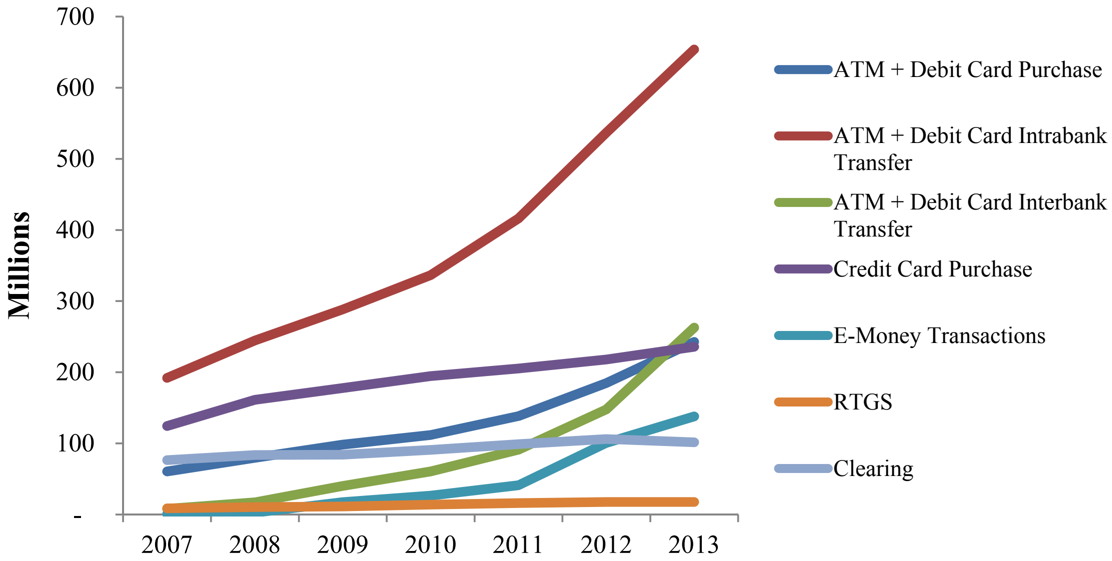
f. Ensure economic viability for service providers.

Experience with Electronic Payments in Indonesia

How extensive is the use of electronic payments in Indonesia?

Though Indonesia continues to be a predominately cash-based society, adoption and usage of electronic payments has been growing in recent years. Over the period 2007–11 for which data was available from Bank Indonesia (BI), the volumes of intrabank account transfers doubled from 200 million to over 400 million transactions per year. Volumes of credit card purchases, interbank transfers made with ATM and debit cards and purchases made with ATM and debit cards also increased substantially during this period. The number of electronic money transactions remains limited relative to other payment streams but a joint agreement signed by Indonesia's three telcos in May 2013 enabling interoperability (payments across networks) for mobile wallet transfers in real-time could drive growth in these volumes. However, these agreements do not enable interoperability with respect to cash-in/cash-out (CICO) and so are unlikely to promote greater financial inclusion through the programme.

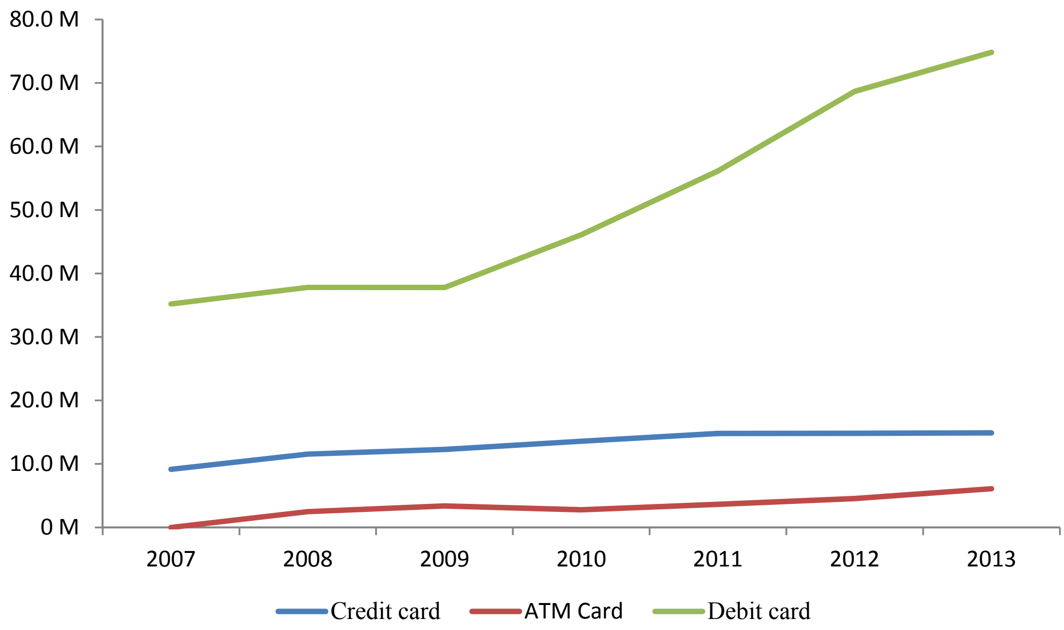
Figure 2. Number of Noncash Payments in Indonesia: 2007–13



Source: Bank Indonesia (2013) www.bi.go.id

Indonesia's large population which is spread over a vast landscape, much of which lacks infrastructure, is a key challenge for programme disbursements. Nevertheless the penetration of Indonesia's retail financial services infrastructure has supported increasing usage of electronic means of payment. Indonesia's metrics for the number of point of sale (POS) or electronic data capture (EDC) devices and the number of bank branches per 100,000 (120 and 8, respectively) – proxies for a country's retail footprint –put it slightly ahead of neighbouring Philippines and significantly ahead of lower middle-income countries such as Kenya. Still, the extent of Indonesia's distribution network sits below those of upper middle-income countries like South Africa and Mexico. The number of debit cards in the market nearly doubled over the period of 2007–11 as shown in Figure 3.

Figure 3. Number of Payment Cards in Market by Type



Source: Bank Indonesia (2013)

Purpose of the paper

The *Program Keluarga Harapan* (hereafter referred to as PKH or "the programme"), launched in 2007 as part of the Government of Indonesia's national poverty reduction strategy, provides conditional cash transfers to poor and ultra-poor households in Indonesia. The government planned to expand the programme to 2.3 million recipients by the end of 2013 and 3.2 million by 2014 and wanted to build on lessons learned from the system in place at the time which incorporated manual transfers and electronic disbursements (although still at the pilot stage). However, a 2013 report identified several areas for improvement within the programme's current method of payments. The implementing unit for the programme (hereafter referred to as UP-PKH) under the Ministry of Social Affairs, faces the challenge of expanding the programme and selecting new payment providers at the same time.

TNP2K therefore contracted Bankable Frontier Associates (BFA) to assist UP-PKH in developing a broader strategy for moving onto an electronic payments system and in drawing up a requirements matrix highlighting minimum requirements for providers.

Structure of the paper

The following section provides an in-depth assessment of the market for electronic disbursements in Indonesia, touching on the legal and regulatory environment as relevant to a revised programme. It also includes a detailed review of the issues around disbursements. Section 3 details the pros and cons of potential options under a revised disbursement system. Section 4 summarises the findings and recommendations from the feasibility assessment and includes a strategy for revising the programme, underpinned by a set of guiding principles and taking electronic payments into consideration. This section also presents a roadmap outlining the way forward for TNP2K and other programme stakeholders. Section 5 provides a requirements matrix highlighting minimum requirements for service providers.

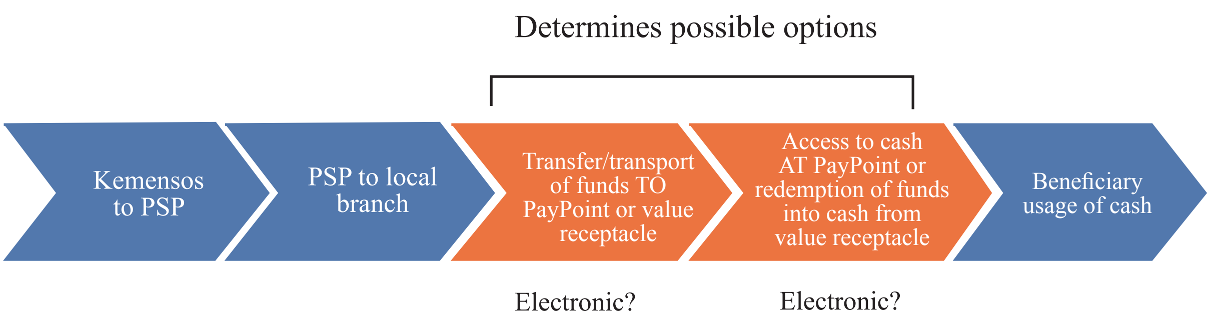
This paper focuses on payment and related aspects of the programme and does not incorporate a discussion of beneficiary management.

Market Assessment for Disbursements in Indonesia

Demystifying electronic payments

A common misconception about electronic payments is that they are end-to-end electronic. However, whether the programme can achieve this standard depends largely on the state of the wider financial ecosystem, for example, how easy or difficult it is to purchase goods electronically and hence the possible need for recipients to encash their government payment. Therefore this analysis focuses on specific parts of the payments value chain which, if delivered electronically, could make the programme more efficient. The analysis of feasible options in section 5 covers the way programme funds are actually disbursed or the value receptacle into which funds are disbursed which influences the extent to which the programme could help promote greater financial inclusion in Indonesia. The programme value chain is depicted in Figure 4.

Figure 4. Components of the PKH Value Chain



Review of relevant information

The authors reviewed experiences with both manual and electronic disbursements using available literature to glean lessons applicable to the programme. The main sources of information, in addition to interviews with staff undertaken in September and December 2013, were: a 'Disbursement of Social Cash Transfers through Bank Accounts' (OPM 2012); a 'Problems and Challenges for PKH' (Hutagalung 2009) and a Case Study on PKH in Sumba Barat and Kedirthe (*Dinar Dana Kharisma* 2007)[3].

The OPM study investigated three disbursal mechanisms in use at the time of writing (August 2012): POS Wesel is a remittance-based payment mechanism offered by the Post Office, Giro POS an account-based payment mechanism, and BRI *TabunganKu* a "no-frills" bank account offered by *Bank Rakyat Indonesia* for the purposes of improving financial inclusion. Since the report was written, PKH Payments through BRI *TabunganKu* have been discontinued.

[3] However, this last source focused mainly on issues around beneficiary selection and management, for example, the management information system, and hence was more valuable for context rather than for identifying issues linked to disbursement of funds

A common set of supply-side lessons were identified as relevant to the programme:

1. **Limited footprint of potential payment service providers (PSPs):** Few bank or nonbank providers in Indonesia currently have a distribution network permitting them to reach beneficiaries in rural and deep-rural locations. The Bank Indonesia regulation requiring cash-out transactions for social transfers to occur at branches of banks or through licenced remittance providers could further limit the reach of financial service providers. The Indonesian post office (PT.POS) currently operates the largest distribution network in the areas where programme beneficiaries live. However, due to regulatory barriers, the accounts that the post office disburses funds into are not financial accounts and hence cannot promote financial inclusion (see next item).

2. **Regulatory uncertainty:** Providers are reportedly unclear about several key aspects involved in electronic disbursements of funds. Among other aspects (see the next section for more detail), the types of accounts that may be used is not clear. There is also uncertainty about the channels that may be used, an issue likely to have been exacerbated by the termination of Bank Indonesia's recent branchless banking pilots.

3. **Lack of clarity potentially limiting ability to pilot new products:** Related to the lack of clarity, providers are not sure if they can pilot services in conjunction with other providers. Some stakeholders report that this is not possible due to the restrictive contracts at present but new service provider contracts should cater for this in the future.

4. **Issues with accounts:** Out of the three types of accounts in use for the programme at the time the OPM study was written – POS Wesel, Giro-Pos and *Bank Rakyat Indonesia* (BRI) *TabunganKu* – significant activation delays were reported for the BRI *TabunganKu* accounts. Some beneficiaries' names had been recorded erroneously in the system, while other beneficiaries either did not have their identity cards (KTP) on them or had discrepancies between different forms of identification. This situation undercut any potential increase in efficiency through electronic disbursements. Accounts used for the programme have also sometimes gone dormant, making it difficult for beneficiaries to use them to save.

5. **Difficulties in beneficiary management:** The programme's management information system does not operate smoothly, causing delays in opening accounts and in authentication which is done before each disbursement. Issues include payments being made to the wrong beneficiaries and lack of proper reconciliation.

6. **Inconsistent service levels:** The effectiveness of troubleshooting procedures has reportedly varied widely between different *Bank Rakyat Indonesia* branches. This has resulted in mixed experiences for programme beneficiaries patronising the different branches.

7. **Lack of motivation among *Bank Rakyat Indonesia*'s management and staff:** The Oxford Policy Management study (2012) found that many of *Bank Rakyat Indonesia*'s managers and staff were poorly motivated which, combined with reported low cooperation among payments providers in the market (as noted above), may have resulted in lower service levels being provided to beneficiaries. At the same time, beneficiaries reported high levels of satisfaction with current disbursement methods, according to the same OPM study.

8. **Business case issues:** *Bank Rakyat Indonesia*'s cost structure appears to be significantly higher than that of the post office with the respect to the number of beneficiaries per paypoint necessary to breakeven (OPM 2012). This may have dampened the bank's incentives to continue participating in the PKH scheme.

9. **A lack of infrastructure with respect to roads, telecommunications and financial services 'touchpoints' (EDC devices, ATMs or bank branches):** This complicates any attempt to execute a truly national roll-out of financial services in rural and deep-rural parts of Indonesia. In some programme districts, it is unlikely that disbursements will ever be made electronically. These districts include remote islands in the Papua Region inhabited by only a handful of beneficiaries, some of which require helicopters to fly in cash. This points to the potential need to use different disbursement options depending on the locality.

Demand-side lessons relevant to the programme include:

1. **Satisfaction with current disbursement methods:** Upwards of 80 percent of beneficiaries interviewed for the OPM study (2012) reported they were "satisfied"[4] with current payment mechanisms and 90 percent considered current paypoint locations either convenient or very convenient. However, only 40 percent of those receiving programme transfers at BRI branches considered them conveniently located.

2. **Time and cost for beneficiaries:** Beneficiaries report that getting to post offices is costly and time-consuming.

3. **Potential numeracy issues:** Although the beneficiaries surveyed self-reported high levels of literacy (75 percent) and numeracy (90 percent), numeracy may be a challenge in practice, given that beneficiaries receiving payments through bank accounts would have to fill out withdrawal slips. However, issues of numeracy have been overcome in other markets where customers have been able to manage these issues, for example, by memorising the configuration of the number pad when entering their PINs at ATMs. Programme facilitators have helped mitigate these types of issues in Indonesia.

4. **Limited familiarity with mobile handsets as a potential issue:** While about 75 percent of those interviewed for the OPM study (2012) had a mobile phone in their household, only 20 percent claimed to own one (the question examined mobile handset ownership and not SIM possession). Therefore, beneficiaries may require some guidance before they can move over to receiving payments using instructions from their mobile handsets for authentication.

5. **Low financial inclusion levels:** Excluding those who opened BRI accounts to receive their programme disbursement, only 30 percent of beneficiaries had previously had a savings account (OPM 2012). Given the difficulties that beneficiaries have reportedly encountered at branches, for example in filling in deposit slips and, in some cases, feeling unwelcome in branches, this lack of familiarity with formal banking services may become an issue. As indicated above, though, government to person (G2P) programmes in other markets have negotiated ways around this issue.

[4] This figure of 80 percent from the OPM study refers to beneficiaries receiving payments across all methods of disbursement. The figure is 45 percent for beneficiaries paid via POS-Wesel but stands at only 10 percent of those paid by BRI. Only 13 percent of all beneficiaries paid via Giro-POS reported being 'very satisfied' with their current payment mechanism

Issues with current manual disbursements under PKH

The following issues with the PKH system in place were identified from stakeholder interviews and visits to paypoints in Jakarta:

- Quarterly payments may not be allowing beneficiaries to maintain a smooth cash flow. It is unclear what beneficiaries' preferences are in this respect. However, any increase to the frequency of payments will need to be balanced against the increased costs incurred.

- Facilitators are taking 1–2 weeks to provide operators with updated beneficiary information, lengthening the reconciliation process. While this issue relates to beneficiary management, it may hamper migration to any new electronic payment mechanisms.

- Parts of the reconciliation process continue to be done manually. The post office reconciles directly with the programme implementing unit but facilitators reconcile manually. This results in a large Excel data entry component under the present process.

- The lack of nationally-representative research on beneficiaries' needs and wants (ideally per paypoint) makes it difficult to evaluate the appropriateness of current payment options.

- The needs of urban vs. rural beneficiaries are unclear.

- Providers are not clear about which channels can be used to make payments (owing to uncertainty about regulations).

- There is a lack of clarity on the type of accounts (financial or non-financial) that can or must be used for the programme.

- Secondary research suggests that there is inadequate staffing to handle beneficiary payouts in some cases.

- There are difficulties tracking beneficiaries over time, given frequent movements; if beneficiaries relocate to areas not covered by the programme, they often cannot receive payments.

- Furthermore, if two or more consecutive payments are missed, accounts are closed.

Bank Rakyat Indonesia accounts have restrictive features such as minimum balance requirements which make accounts costly for beneficiaries to use and maintain. These accounts are passbook-based and cannot be used with ATMs.

Bank Rakyat Indonesia has reportedly closed accounts that have no funds left in them, meaning beneficiaries were unable to receive their payments ontime during the subsequent disbursement cycle.

- Giro POS accounts are not financial accounts and cannot be used to make transfers or hold deposits.

- Some pay-offs to facilitators have been reported. However, it is unclear how widespread this practice is and whether it is a major concern for beneficiaries.

- The post office uses a proprietary solution as part of a single-provider system at the moment.

Other complaints have arisen because *Bank Rakyat Indonesia* is required to return funding to the government in the event that beneficiaries do not claim it.

Some customers have been told to return to the branch at a later date, even if they had come at their designated time to receive their payment. In some cases, *Bank Rakyat Indonesia* has capped the number of beneficiaries who can receive payments on a given day at 30 (even where more are due to receive their disbursements).

Key aspects of the enabling environment for electronic disbursements

The ability to make electronic programme disbursements efficiently and effectively will not simply entail selecting the best service providers. Rather, the structure of Indonesia's national payments system and the degree to which it enables interoperability among participants will help determine the feasibility of using electronic disbursements as part of the programme system. This will differ by district and so suitable methods will need to be employed in each district. Indonesia's national payments system has several key building blocks in place. Although no act or legislation deals specifically with payment systems, the Bank Indonesia Act (1999) empowers the Central Bank to regulate and oversee payment systems in Indonesia. In this role, Bank Indonesia issues guidance and directives related to payments and has the sole mandate to authorise non-bank financial services providers.

Bank Indonesia operates Indonesia's two main interbank clearing and settlement systems. The first, the real-time gross settlement (BI-RTGS) system, launched in 2000, settles interbank high-value payments on a multilateral deferred net settlement basis (calculating banks' financial positions against one another using financial software before settling, so as to reduce the number of large-value transactions per day). All commercial banks have a pre-funded settlement account at the Central Bank for this purpose. Rural banks are not permitted to participate directly in interbank clearing and settlement but other selected financial institutions are.[5]

Since 2005, Bank Indonesia has also operated the national clearing system (known by its initials in *Bahasa Indonesia*, SKNBI) which provides interbank clearing for electronic funds transfer (EFT) credit transactions as well as for cheques. SKNBI does not cater for EFT debits[6] which are still processed manually (on paper). This has inhibited utility companies from using direct debit arrangements to streamline bill payment services.

Interoperability in ATM and EDC payment streams remains limited. There are three shared domestic

[5] EMEAP overview of the BI's role in the national payment system. http://www.emeap.org/emeapdb/upload/WGMeeting/Payment,clearing%20and%20settlement%20systems%20in%20Indonesia.pdf

[6] As of 2010, the date of the EMEAP resource, which is the most recent document publically available on Indonesia's national payment system

ATM networks (ATM Bersama, ATM Prima and Alto) and two international networks (Cirrus of MasterCard and Plus of Visa International). The domestic networks are not interoperable for all participants, forcing banks to join multiple networks. With respect to POS, the lack of commercial agreements among acquirers – the providers of POS devices – has led to these devices being duplicated, with a single merchant having as many as 10–20 different POS devices. Many commercial banks continue to issue proprietary debit cards which inhibit interoperability.

At the time of writing, banks have only recently been permitted to use cash-in/cash-out agents for conventional bank accounts and have not yet launched these services. In November 2014, the Indonesian Financial Services Authority (*Otoritas Jasa Keuangan*, popularly known as OJK) released draft regulations that will allow banks and other financial institutions to widen their use of agents for opening and servicing basic deposit accounts.[7]

Although banks are not yet allowed to use agents for full bank accounts, a number of banks, mobile network operators and other companies have electronic money licences. These are issued by Bank Indonesia and allow them to provide storage and transmission facilities for electronic money. This includes the use of agents, although the regulations differentiate between "Book 4" banks who are allowed to use a wide range of parties as agents, including individuals, and other issuers (including telcos) who are restricted to using legal entities such as formalised businesses, companies and co-operatives.[8]

Key aspects of the legal and regulatory environment

Thus although the national payments system does not support interoperability across all retail payment streams, use of electronic payments is growing in Indonesia. However, lack of clarity concerning key legal aspects has caused uncertainty for both the Ministry of Social Affairs (Kemensos) and for potential programme providers. TNP2K commissioned Michael Pratanto Law Office's to produce a report highlighting key issues,[9] including:

- Which types of payment service providers (PSPs) – banks, rural banks, telcos and other non-bank financial institutions –are eligible to be used for the programme;

- Does the Ministry of Social Affairs need to engage in an annual public tender process to select service providers;

- Can the Indonesian post office hold funds and issue savings accounts;

- Could the Ministry of Social Affairs appoint service providers directly;

[7] 19/POJK.03/2014 19/POJK.03/2014 on branchless financial services in the framework of financial inclusion
[8] PBI No.16/8/PBI/2014
http://www.bi.go.id/id/peraturan/sistem-pembayaran/Pages/PBI_16814.aspx
[9] Final report on the regulatory review on the issues in selecting payment service providers for distribution of payments of PKH, Internal TNP2K document produced by Michael Pratanto Law Office, 2013

- How did Bank Indonesia's 2013 branchless banking pilots work, were they legal and could current and potential service providers make programme disbursements via such branchless delivery channels; and

- Are certain regulations, presidential instructions, and so on, applicable to programme disbursements.

While it exceeds the scope of this study to comment on the applicability of this report to electronic disbursements for the programme, several issues emerge from this document, as shown in Table 1.

Table 1. Key Legal Issues Relevant to PKH Disbursements and Service Providers

Key issues identified in the review undertaken by the Michael Pratanto Law Office for TNP2K	Parties best-positioned to address issue
From Ministry of Social Affairs' perspective, the requirement for a public tender process has slowed down the selection of PKH service providers	Issue for the ministry to raise with respective authorities within government Capacity planning within the ministry is also likely to be required, given that the requirement is for an annual tender
It appears that only banks and post offices can currently serve as service providers for the programme Telcos can undertake "certain supporting roles and functions" (not named) within the programme but mobile money accounts cannot serve as the stores of value for programme disbursements	Issue for the Ministry of Social Affairs to raise with the Ministry of Finance One possible way to manage this issue may be for telcos or electronic money providers to collaborate with banks. It may be possible for a bank to handle clearance of telco payments
Lack of clarity as to whether the post office can issue savings accounts and hold deposits	Issue for the Ministry of Social Affairs to raise with Bank Indonesia.
Document does not comment on the legality of using cash-in/cash-out agents	Ongoing issue. Termination of the branchless banking pilots may have exacerbated the lack of legal certainty with respect to these agents

Source: Unpublished review, Michael Pratanto Law Office

Cooperation between the Ministry of Social Affairs, Bank Indonesia and other relevant authorities within the bank will be required to address these issues. Note that the authors included this section to provide a broad view of potential legal stumbling blocks for the programme going forward. This section should in no way substitute for additional legal analysis that either potential programme providers or the Ministry of Social Affairs may wish to undertake as they consider their role in the revised programme.

Feasible Options under a Revised PKH Delivery System

Advantages and disadvantages of electronic payments

The documented advantages associated with electronic disbursements have made incorporating them within government to person programmes attractive to many scheme administrators. While most of these schemes will always need to distribute cash to some beneficiaries, incorporating alternative payment mechanisms could bring about the following benefits:

- **Reduced cash-handling expenses for the scheme:** Moving cash is expensive. Many government to person schemes either use their own staff and/or vehicles to transport cash or pay a cash-in-transit company or financial institution to perform this service on an outsourced basis. Using government staff to transport cash is not only considered inefficient but also carries security risks. Incorporating alternative mechanisms would reduce the amount of cash to be transported and could reduce administration expenses.

- **Enhanced convenience for beneficiaries:** Most manual transfers require beneficiaries to appear at a specific time and place to receive their disbursement. Alternative payment mechanisms may let them receive their funds at a time and place of their choice. This could also reduce transport time and expenses for beneficiaries, although this would depend largely on the proximity of paypoints to their homes or places of work.

- **Supporting financial inclusion:** In many emerging markets, a large number of beneficiaries could be excluded from using formal financial services. Many face difficulties in obtaining credit, insurance or savings products from formal financial institutions that do not see them as part of their target market. Government to person schemes can help address these issues. Schemes that disburse funds into accounts issued by financial institutions (for example, banks or, in some markets, mobile money operators) may provide beneficiaries with a savings vehicle[10]. The ability to store funds in the account and withdraw money as needed, rather than cashing 100 percent of the disbursement upfront,would enable beneficiaries to carry smaller amounts of cash. However, this will depend on whether beneficiaries can use their accounts within their local financial services infrastructure, as explored later.

- **Catalysing growth of financial services infrastructure:** Alternative payment mechanisms typically require the use of an acquiring device, such as an EDC device at a merchant. Government to person payments could increase the transaction volumes on existing acquiring devices or give financial service providers incentives to "acquire" merchants to make disbursements to beneficiaries[11].

[10] However, the ability of beneficiaries to save with their government to person account depends on the account's features. In Mexico for example, *Oportunidades* beneficiaries received disbursements into a bank-issued savings account but were still required to cash 100 percent of their funds; they could not leave even a portion of their funds in the account. While beneficiaries in select regions were allowed to re-deposit money at their paypoint, this process was widely viewed as reducing beneficiaries' incentives to save.

[11] A detailed analysis of the economics to service providers of deploying POS and other types of acquiring devices at the local level exceeds the scope of this study.

However, the use of alternative payment mechanisms is unlikely to resolve all the issues associated with government to person schemes, particularly those related to beneficiary management. The following are potential drawbacks associated with alternative payment mechanisms:

- **Possibility of increased costs to beneficiaries:** As noted earlier, alternative mechanisms could offer beneficiaries improved convenience as well as savings with respect to transport costs and time, depending on the locations of paypoints. However, the accounts into which disbursements are made can also result in additional layers of cost for beneficiaries. In some markets, minimum monthly fees have resulted in beneficiaries receiving less than the full value of their grants[12]. Similarly, unmet minimum balance requirements can result in beneficiaries' accounts being closed and a loss of or delayed access to funds.

- **Not a solution to 'leakage'-related issues:** A common misconception is that electronic disbursement mechanisms eliminate leakage or the delivery of funds to the wrong party. However, paying to the correct person still depends on having reliable authentication processes – no matter what type of payment mechanism is used. While key features of payment instruments used with electronic disbursements such as PINs or biometrics may streamline the authentication process, they are also susceptible to fraud and user error (for example, forgotten or stolen PINs) and therefore may simply result in paying the wrong people more quickly.

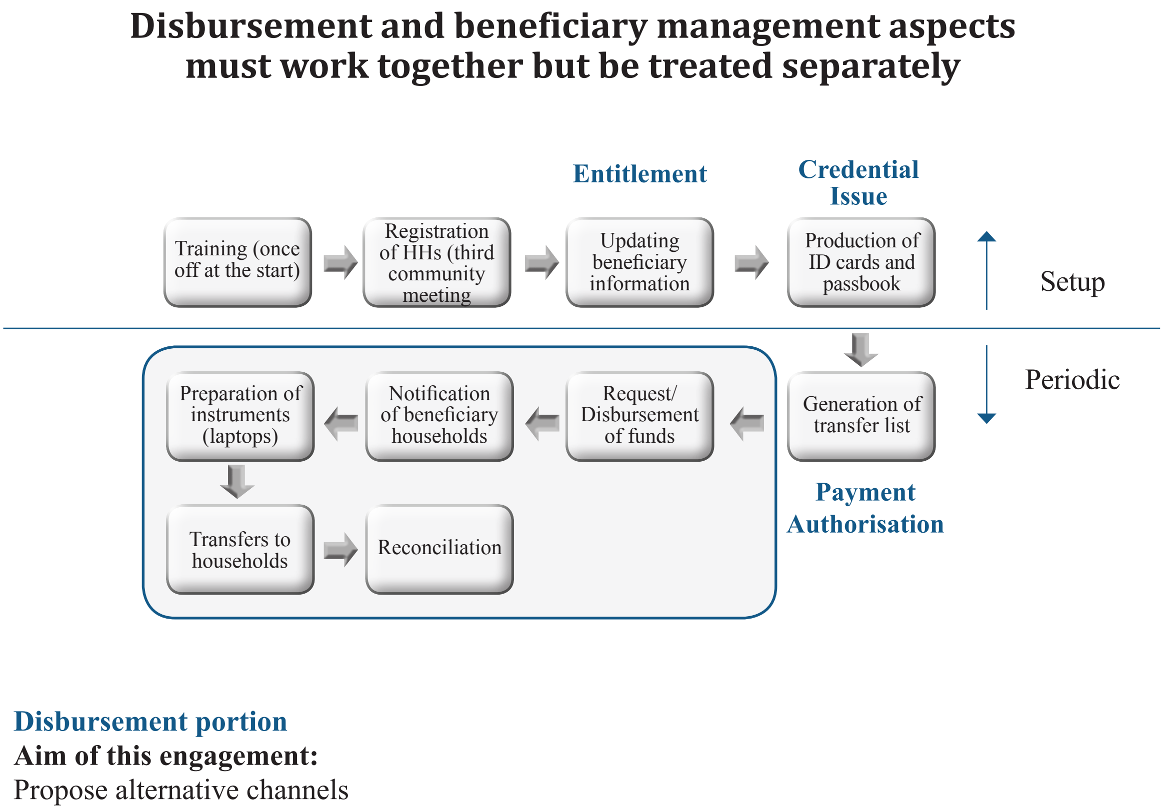
- **Reliance on local financial services infrastructure:** The extent of local financial services infrastructure in making electronic disbursements is paramount. To provide beneficiaries with a convenient and affordable means of obtaining their disbursements, financial service touchpoints such as EDC devices, ATMs or bank branches must be located within a reasonable distance of their homes or places of work. Government to person scheme administrators ideally need a detailed understanding of the financial services infrastructure at the local level before they embark on a total or partial migration to electronic means of disbursement (see the next section for a full list of principles for a revised PKH).

Requirements for solutions under a revised PKH system for disbursement

This project's mandate was to focus on the disbursement of programme funds to beneficiaries rather than on the earlier parts of the programme process chain such as identification and enrolment of beneficiaries and ongoing beneficiary management. However, the two are inextricably linked and so issues relating to processes such as registering and authenticating beneficiaries and reconciling accounts will affect disbursements. As mentioned, electronification could in some cases simply result in paying the wrong people more quickly.

[12] While such costs would ideally be compared with the cost of cash in any determination of the relative costs of electronic vs. manual disbursements, beneficiaries are unlikely to make this calculation. Hence excessive fees from bank accounts linked to government to person schemes may result in beneficiaries being unwilling to use the accounts and, potentially, preferring manual disbursements.

Figure 5. PKH Process Chain and Scope of the Assignment



Source: Government of Malawi (2013)

There were no explicit business or process related requirements for solutions under a revised programme. However, the authors wanted to obtain inputs from key stakeholders on the essential aspects to consider in revising the programme. A workshop was convened with staff from TNP2K, the National Development Planning Agency (*Badan Perencanaan dan Pembangunan Nasional* – Bappenas), the programme implementing unit and Bank Indonesia on 10 September 2013 to discuss various principles and issues related to the programme. Stakeholders were asked for their views as to key aspects for the programme going forward – with their ideas given orally and in free-response mode. Stakeholders considered the following as material to the programme (in no particular order):

- Liquidity of agents (the ability of agents to provide sufficient cash to beneficiaries);
- Mobile phone ownership limiting the potential of branchless banking as a disbursement mechanism, given that only 20 percent of beneficiaries have mobile phones. Other issues related to mobiles are, for example, training in using mobile handsets and mobile money services, difficulty charging handsets and how easily handsets can be damaged;
- Whether PINs provided by financial service providers can be used as a means of authentication;
- The ability to link bank account numbers to mobile phone numbers, presumably to mitigate issues of having to manage or remember multiple account numbers;

- Programme requirements for testing technology, for example, setting standards for acquiring devices such as EDC machines;
- How the system affects beneficiaries, for example, convenience of paypoints, time constraints and the costs of receiving funds;
- Procedures for dispute resolution and customer queries concerning lost cards, forgotten PINs, and so on;
- Minimum notes sizes requirements for cash disbursements to beneficiaries;
- Requirements for service providers to be interoperable;
- Management of payment service providers;
- Fees – whether to adopt a standard fee or differentiate based on geographic and other conditions, for example, fees for disbursements made in urban as opposed to rural or deep-rural areas;
- Considerations that identify key populations, for example, the disabled and the elderly;
- Whether simplified Know Your Customer (KYC) procedures would be permitted. Stakeholders had numerous questions in this area, including which documents would be required, whether photos would be needed, whether facilitators could perform these procedures and requirements for updating beneficiary details.

A comparative survey of stakeholders' priorities for the revised programme was carried out during both the training sessions and the workshop held in September 2013 as well as through the one-on-one interviews conducted with key stakeholders in December 2013. See later sections for a clear articulation of stakeholders' priorities.

Overview of sets of feasible options identified

Methodology

This study of options for revising the programme that consider electronic payments was carried out in several phases from September 2013 to January 2014 and involved:

- Interviews with programme stakeholders and programme beneficiaries;
- Training on government to person scheme practices in other countries;
- A strategy development workshop with stakeholders from TNP2K, the National Development Planning Agency, the PKH implementing unit and Bank Indonesia; and
- Follow-up interviews and questionnaires.

Overview of options identified

A set of options for a revised PKH was drawn up using inputs gathered from stakeholders during the one-on-one interviews, training sessions and workshops conducted in September 2013 and also from the interviews and workshops in December 2013. These options are outlined below. The following column headers from the table in Table 2 capture the points of distinction in the options considered:

- Location;
- Authentication device: device used to identify beneficiary;
- Payment instrument: used to transfer value from one party to another;
- Value receptacle: store of value into which disbursement is made, for example, a bank account or mobile money account; and
- Acquiring device: physical or virtual interface provided to process payments at the customer-facing end, for example, ATMs or EDC devices.

Across these categories, managed paypoints (in the first five rows) are those where beneficiaries receive instructions to appear at a specific time and place to receive cash transfers as per the current modality in all programme districts. Self-service paypoints, on the other hand, give beneficiaries some flexibility as to the timing and possibly also the location where they receive their cash transfer. With self-service paypoints, the burden of transporting and managing cash would shift entirely or in part to private service providers – the merchants, bank or non-bank agents or the institutions they represent. (While bank and telco cash-in/cash-outagents are not currently permitted to act as service providers, they may be in the future – hence their inclusion in Table 2).

The payment instrument and type of value receptacle used in each option relates to the acquiring device. For example, bank cards used at EDC terminals typically would be linked to a bank account or a prepaid account.

Table 2. Overview of Manual and Electronic Payment Options

	Location	Authentication device	Payment instrument ('Use…')	Value receptacle ('To pay into…')	Acquiring device to enable cash payout ('On…')
			Assisted payments/ disbursements		
1	Assisted paypoint: POS Wesel	List of beneficiaries and PKH ID	Cash	None	Cash van
2	Assisted paypoint: POS Giro	List of beneficiaries and KTP ID or PKH ID	Cash	Account number (virtual, non-financial account)	Cash van
3	Assisted paypoint: BRI branch	Passbook and national ID	Cash	Bank account (*BRI Tabunganku* account)	Over-the-counter

4	Assisted paypoint	EDC	Bank card	Bank/ pre-paid account	Cash van
5	Assisted paypoint	Mobile phone/ SIM	Instruction through a mobile phone	Mobile money account	Cash van
6	Assisted paypoint	Hybrid mobile phone / barcode card	Instruction through a mobile phone or barcode card	Mobile money account	Post office,over-the-counter
			Self-service payments/ disbursements		
7	Merchant	Bank card + PIN	Bank card	Bank/pre-paid account	EDC
8	On/offsite ATM	Bank card + PIN	Bank card	Bank/pre-paid account	ATM
9	On/offsite ATM	Mobile number	Token number (‘cardless’)	Bank/pre-paid account	ATM
10	Mobile money agent	Mobile phone/ SIM	Instruction through a mobile phone	Mobile money account	Mobile phone, EDC or web-enabled device
11	Bank agent	Mobile phone/ SIM	Instruction through a mobile phone	Bank/pre-paid account	Mobile phone
12	On/off site ATM (cardless withdrawal)	Mobile phone / SIM + PIN	Instruction through a mobile phone	Mobile money account	ATM
13	Bank agent	Bank card + PIN	Bank card	Bank/pre-paid account	EDC
14	Bank branch	Bank card + PIN	Bank card	Bank/pre-paid account	EDC

Pros and cons of identified options

The assisted payment options are, by definition, located near beneficiaries under the current system of manual transfers. Assisted disbursements,where beneficiaries receive cash in pre-packaged disbursement bundles, also avoid potential numeracy and literacy issues. However, managing and transporting cash, as under the manual system, is more costly and less efficient in most cases than if dedicated professionals were managing these aspects. This may not hold true for certain exception areas, for example, deep rural areas where it may be cheaper to continue using the existing method until alternatives become viable. Problems relating to reconciliation, which facilitators are responsible for initiating, have resulted in delays in payment of several weeks.

The self-service payment options would significantly improve reconciliation procedures, which would be automated rather than performed at the conclusion of each payment cycle. Migration to a network of self-service merchants, bank agents and/or mobile money agents would offer beneficiaries greater flexibility as to the timing of payments and perhaps the location as well, pending decisions by TNP2K on allowing multiple providers in each district under the revised programme. Many of these benefits could also be realised with assisted payments if the disbursing party used EDC or mobile phones rather than the current manual registers.

The main challenge associated with self-service disbursements relates to any numeracy and literacy constraints created by beneficiaries having to read ATM menus, use bank card PINs, mobile phones and/or mobile tokens. Close coordination with potential providers would be necessary to estimate the costs of training beneficiaries, perhaps through customer education. Still, experience in South Africa, Kenya and other markets suggests that numeracy constraints are surmountable and everyone is able to recognise patterns and manage PINs to access banking and mobile phone infrastructure.

Impact of choice of paypoint options on programme processes

As noted above, the mandate for this project related primarily to the disbursement of programme payments. However, it is worth noting that the choices and trade-offs in the payment options outlined are likely to have an impact on other parts of the programme value chain. The PKH system can be thought of as having the components shown in Figure 6.

Figure 6. Components of the PKH System

Programme administrator
Responsible for enrolment of recipients, maintaining records, and issuing payment instructions to the payment service provider.

Programme management information system (MIS)
Maintains records on recipients and using programme rules will calculate the value and due date of recipient payments to produce a payment instruction file which is sent to the payment service provider.

Payment service provider (PSP)
Disburses funds to recipients according to payment instructions at payment points using secure process

Payment points (distribution)
Bank branches
Post office branches
Local shopkeepers
Airtime dealers

Technology
Transaction device ATM, POS, Mobile handset
Payment instrument Magstripe/ Smart card
Authentication process PIN, biometric

Recipient
Individual eligible to receive payment

Clearly the selection of one or more payment options will influence the identity of the service providers, the type of technology employed and the manner in which beneficiaries are able to receive their disbursement. To illustrate the potential implications at a detailed level, we look at the programme's authentication process. Good practice in the area of authentication states that it must be based on two (if not three) distinct "factors" or means of identifying oneself. These are generally grouped as follows: something one has, such as a passbook or ID card; something one knows, such as a PIN or account number; and something one 'is', such as a fingerprint. Government to person schemes around the world typically require two-factor authentication. The following table provides an example of the authentication approaches used by different schemes:

Table 3. Factor Trade-offs in Authentication

Factors	No instrument/ token	Card and PIN	Card and biometric	SIM card
1. Something you have	ID book or ID card	Magstripe card	Smart card	SIM
2. Something you know	PIN (optional)	PIN		PIN
3. Something you are			Fingerprint	
Example	"Calpay" initially used in Disarmament, Demobilisation and Reintegration payments in Democratic Republic of Congo	"Allpay", Child welfare grant in South Africa	"FINO" service used to disburse National Rural Employment Guarantee Act grants in India	

Source: BFA (2013)

Note: The following acronyms are used in this chart:
ID = Identification, PIN = Personal Identification Number, DDR = Disarmament, Demobilization and Reintegration, DRC = Democratic Republic of the Congo, SIM = Subscriber Identity Module, NREG = National Rural Employment Guarantee Act (NREG)

Most schemes have taken one of two approaches, requiring a combination of either a passbook or identity card along with a PIN or else a smart card which substitutes biometric recognition (for example, fingerprint or retina scan) for a PIN number. In this way, choices of programme paypoints and payment service providers will help determine what type of authentication procedures must be put in place for the programme going forward.

Importance of type of account provided to beneficiaries

Regulations in Indonesia stipulate that commercial banks and post offices are the only entities that can provide programme beneficiary accounts (note that the post office account is not considered a financial account). To date, *Bank Rakyat Indonesia* and the post office have been the only service providers with respect to electronic programme disbursements. A key issue that has emerged in similar schemes is the type of account offered by service providers. Banks typically prefer to provide standard mass-market current or savings accounts to beneficiaries of these schemes, partly to save money on product development costs.

However, these accounts may carry monthly fees and/or minimum balance requirements which can make them expensive for beneficiaries. For example, in 2006, Opportunity International Bank of Malawi issued beneficiaries of an emergency famine relief programme with its proprietary smart cards (branded cards that could only be used with their own EDC machines). These cards proved costly for beneficiaries to use as the cost of the smart card combined with transaction fees associated with the accounts equated to roughly 23 percent of the grant amount. This limited their use of these accounts (although a small proportion of beneficiaries did eventually begin to use the accounts as a savings vehicle).

It is understandable that the bank in Malawi and other financial institutions would want to use their standard bank accounts for these schemes. Product development costs are typically fixed expenses and many financial institutions do not view beneficiaries of these schemes as a profitable customer base (especially not on the basis of revenues associated with the savings/current account on a stand-alone basis – without crossselling additional products). However, without appropriate products, beneficiaries are unlikely to use their accounts for anything beyond cashing their social transfers. To increase the likelihood of beneficiaries using their accounts on a more regular basis, the 2006 government to person scheme scoping report commissioned by the Department for International Development (DFID) (BFA 2006) recommends that all government to person scheme accounts meet the following product feature requirements:

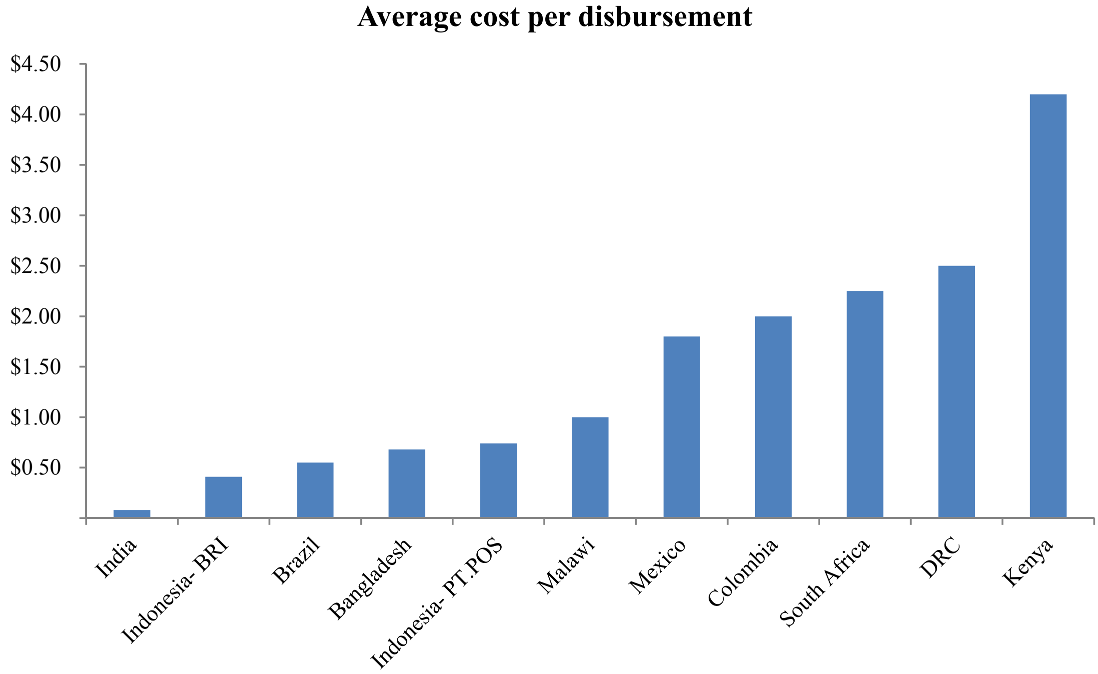
- No minimum balances;
- No initial fees or monthly/periodic fees; and
- Preferably, beneficiaries are able to send and receive funds via electronic transfers.

These recommended product features do not mean that service providers will have to provide loss-making accounts in order to participate in PKH. However, the small balances typically associated with these accounts make it difficult for them to be profitable based on interest income alone, underlining the importance of providing adequate delivery fees to service providers (see discussion of principles later for additional detail).

The choice of service provider together with the choice of account or store of value into which disbursements will be paid also carry costing implications. Disbursements made by the post office typically cost the programme IDR8,500–9,500 (or US$0.75)[13] per disbursement, whereas those made into *Bank Rakyat Indonesia* accounts average IDR5,000 (or US$0.40) per disbursement. This places Indonesia on the less-expensive side of the spectrum relative to other schemes whose costs per disbursement typically range from US$0.50 to US$4.00.

[13] Using the exchange rate of US$1.0 to IDR12,1915, according to google currency converter as of 7 January 2013

Figure 7. Comparing Government to Person Scheme Costs on a Per-disbursement Basis



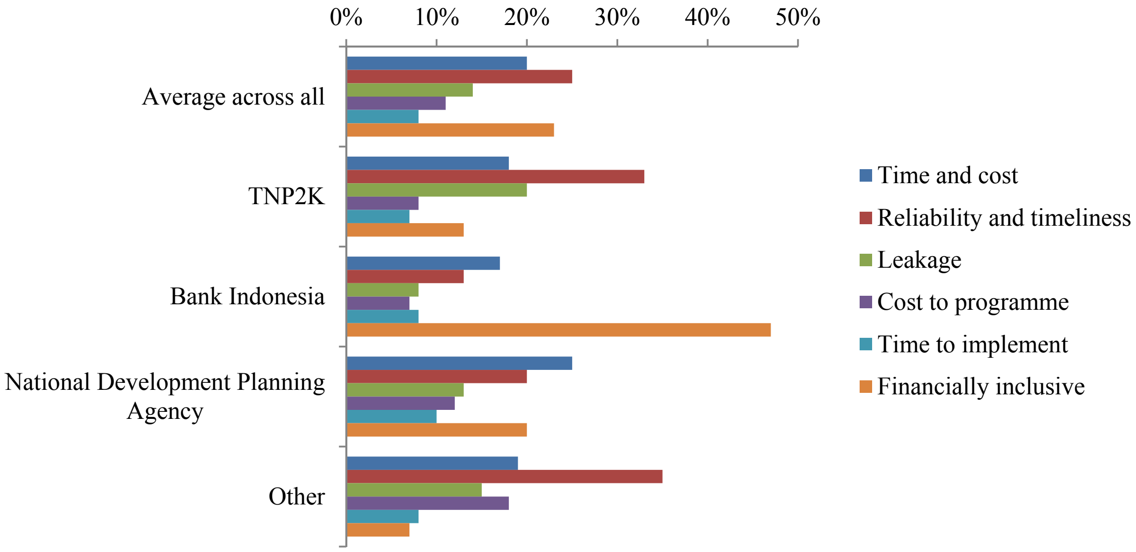
Source: BFA(2009) except for Indonesia data from interviews and research for the present project

Prioritising the options

No single type of manual or electronic disbursement option can be considered perfect or capable of meeting all of the programme stakeholders' desired system specifications (as outlined earlier). Rather, deciding on the set of paypoint options to use will involve making trade-offs in key areas. For example, the cheapest paypoint options from the perspective of the programme administrators may not be the cheapest for the beneficiaries. Likewise, implementation times will vary for different paypoint options, as will their capacity to promote financial inclusion in Indonesia.

To clarify the priorities among the programme stakeholders with respect to various aspects of these schemes, the authors asked stakeholders to assign ratings to generic programme aspects during the workshop held in Jakarta on 10 September 2013. These aspects included: minimising time and cost to beneficiaries; reliability and timeliness of disbursements; minimising system leakage; reducing programme costs; reducing the time needed to implement; and the capacity of the system to support financial inclusion. The average responses by institution and for the group of stakeholders attending the workshop as a whole are shown in Figure 8.

Figure 8. Weighting of Key Aspects in the Evaluation of Government to Person Schemes



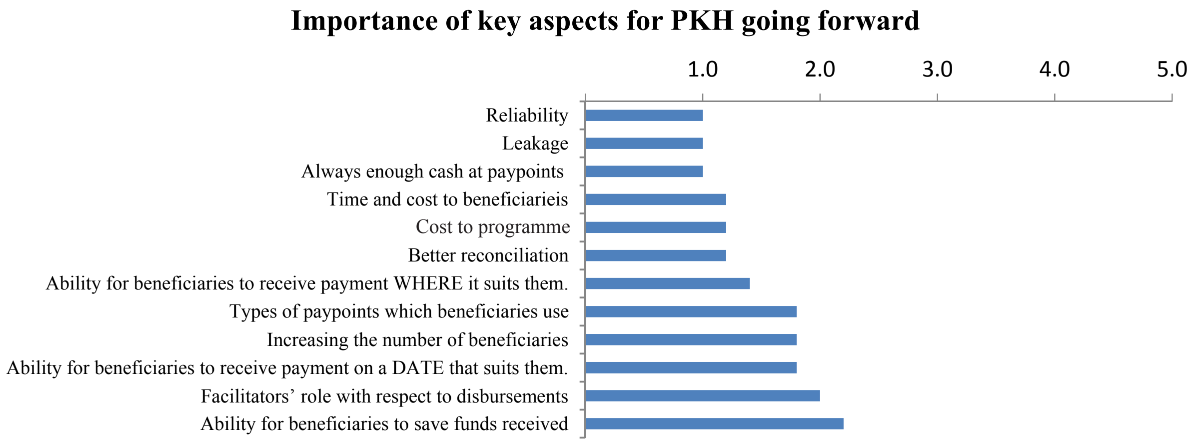
Source: Stakeholder views as compiled by the authors during the workshop held on 10 September 2013

Note: stakeholders were given 100 'points' to assign across the six key aspects identified. Due to averaging, the results for each group may not sum up to 100.

Reliability and timeliness of disbursements emerged as a top consideration across most of the stakeholder groups, receiving 25 out of the total 100 points when averaged across all groups. The programme's capacity to promote financial inclusion emerged as the most important consideration by far for the workshop attendees from Bank Indonesia. After reliability and timeliness of disbursements TNP2K also considered leakage important.

The authors also met with key stakeholders individually during the week of 2–7 December 2013 to gauge their views on priorities for the programme going forward. The views of the key decision makers interviewed were similar to the views of those who attended the workshop and training in September in that reliability, reduced leakage and minimising time and cost to beneficiaries were all rated as "very important" on a five-point scale (see Figure 9).

Figure 9. Importance of Key Aspects of the Programme Going Forward



Source: Team interviews (December 2013)

Note: 1 = very important, 2 = important, 3 = neutral, 4 = unimportant, 5 = totally unimportant

Implications for beneficiaries of introducing electronic disbursements

The choice of options for revising the programme also has implications for beneficiaries. The key change brought about by including electronic payments in the revised programme would be the introduction of self-service payment points. The implications of managing manual and electronic disbursements going forward are summarised in Table 4.

Table 4. Implications of Assisted vs. Self-service Payments

Field disbursement campaigns (assisted payments)	Electronic payment disbursement (self-service payments)	Implications
Will always be the fall-back mode of disbursing – if all else fails and the recipient must receive money then UP-PKH will deliver the cash	Will be the alternative way of receiving payments and accessing cash; requires self-reliance on the part of the beneficiaries	For the foreseeable future the two methods – namely formal field disbursement campaigns and electronic payments – will have to co-exist
Fixed calendar of activity in defined locations thereby giving precise knowledge of cash needed, date and place wise	Recipients can receive their payment wherever they are and go and withdraw cash Allows for disbursement dates to be spread across recipients to reduce cash demand	Cash availability becomes an issue and whether cash-out locations are wherever the recipient needs them This may cause liquidity issues that need to be addressed

Trusted environment with ministry staff to assist the recipient	The recipient has to interact with whatever cashing agent or facility has cash	Recipients probably have to find a cash-out point (formal or informal) where they can access their cash As benefits are usually for the vulnerable and needy this places further risk where they may be defrauded
No special process knowledge or skill required other than to appear and be authenticated and have cash packet handed over	Knowledge of and ability to use an ATM, ATM card, PIN and probably a mobile phone Need to be in a cell coverage area to receive alerts and make transactions	Exclusion of those who are not numerate or literate Cell coverage may not be good in the poorest areas as no economic driver for mobile phone operators to deliver coverage
TNP2K can use the disbursement campaigns for administrative field work by tagging along and assessing payment processes	Little field campaigns available for fieldwork for TNP2K which may also impact on other non-cash programmes Monitoring of cash availability and service is difficult as it is dispersed.	The ministry will have to run separate campaigns Also TNP2K loses field process oversight Disbursement quality control becomes difficult as the distribution points are widely dispersed.

The Ministry of Social Affairs will probably need to continue making at least some disbursements manually for the forseeable future. Especially in deep-rural areas located far from first-tier transport and financial services infrastructure, the most efficient solution may be for the programme to continue to provide manual disbursements to beneficiaries. This approach would avoid potential issues related to numeracy and literacy which may arise as beneficiaries are asked to change to using bank or pre-paid cards and mobile handsets as payment instruments.

The integration of one or more self-service options would offer beneficiaries greater convenience and flexibility in how they receive their disbursements (see next section for a commentary on the staging of this potential transition). However, these options are not without drawbacks. Beneficiaries may be responsible for locating nearby paypoints for themselves in the absence of traditional information campaigns and communications provided by facilitators. Elderly beneficiaries or those with no means of transport may have to ask friends and family members to seek out paypoints on their behalf.

Articulation of Core Principles and Strategy

Suggested core principles for electronic payments within the revised programme

Indonesia is not alone in its desire to distribute government to person scheme payments efficiently and in a manner that leads to a more inclusive financial system. The selection of a solution or solutions may depend not only on the advantages, relative costs and implications of the individual options identified but also on core principles derived from previous international experience.

Ongoing principles

We have divided the principles into core or ongoing principles and implementation principles. With respect to the former, we recommend the following:

a. **Leverage existing infrastructure as much as possible and ensure that the chosen solutions are fully integrated into the national electronic payments infrastructure.**

   Given that retail banking infrastructure penetration remains limited in rural and deep-rural areas of Indonesia, leveraging payment service providers that are present in current and future programme sites may enable the implementing unit to make cash transfers more efficiently. Using existing infrastructure (rather than bringing in additional acquiring devices) would increase transaction volumes at existing service points and reduce the costs of becoming a programme service provider.

b. **Use an open system. Avoid the use of proprietary (closed/unique) technology and make participation in the programme open to as many service providers as possible.**

   All distribution point types that are viable in each district should be investigated and multiple types of value receptacle providers engaged with the aim of maximising availability of all disbursement services at all distribution points. An open, non-proprietary system which involves multiple payment service providers stands the best chance of developing the supply-side (distribution networks) in tandem with beneficiaries' growing demand for financial services and avoids a restricted outcome. The options selected should inspire trust and certainty in the system. Equally important is the affordability of financial services for programme beneficiaries which can be promoted by ensuring that electronic disbursement solutions are competitively supplied and non-monopolistic with respect to the number of participating service providers. Note that while acquiring would be open to all, allowing a single issuing agent per paypoint or per district initially could be considered. This would enable providers to open accounts linked to mobiles and/or cards as part of a bulk registration process until such time as the market is better able to handle multiple issuers.

c. **Ensure multiple providers are used.**

   The general principle here is to promote competition among service providers so as to reduce service provider fees and deliver high levels of service to beneficiaries. As the Government of Malawi's manual notes (Government of Malawi 2013), while a single-provider system may be easier to manage with respect to procurement and contracting, it carries significant disadvantages in the long run. These include: limited footprint and ability to scale up; the potential need for substantial investment in infrastructure by a single party; lack of interoperability; and potentially monopolistic effects from having a single service provider (Langhan et al 2010)[14]. One approach to enable the use of multiple providers that has worked well in other markets has been to tender initially only on the issuing (card/account) side while having caveats on the side of the acquirer or provider of financial services infrastructure (for example, EDC devices) so they agree to service all programme beneficiary cards in their area. Ideally there would be no need to tender in the long run as the system would pay into whatever location the beneficiary wishes to withdraw money from. The transition from a single-acquirer environment (per locality) to one in which at least some beneficiaries may choose between two or more locations at which to receive their funds should be gradual, as explored later.

d. Align the chosen solution with global electronic payment standards.

Adopting solutions based on global standards will help ensure that procedures for access, authentication and authorisation are practised and enforced. The system can be interconnected with and thus lever off the national infrastructure, for example, national switch and linked ATMs and/or EDC. This will allow the use of interoperable payment instruments such as bank cards at all points where electronic transactions are possible in Indonesia.

e. Incorporate a focus on financial inclusion.

First, enabling disbursement directly into beneficiaries' accounts would provide many with an account at a formal financial institution for the first time and be a potential vehicle for accumulating savings. Findings from other markets indicate that people who are part of these kinds of schemes have the capacity to save. For example, the World Food Programme reported that beneficiaries in Malawi saved an average of 9 percent of the funds delivered for emergency cash transfers. Second, the disbursements can support the development of financial services infrastructure in remote areas. While activity from the programme disbursements alone is unlikely to be able to sustain infrastructure such as EDC devices at local merchants, beneficiaries using their accounts to store value and make transactions at local shops may result in greater electronic transaction volumes – not to mention foot traffic.

f. Ensure the privacy and dignity of beneficiaries.

For many beneficiaries, receiving money into an account and withdrawing it at a bank branch can mean that they are using a formal financial institution for the first time. In other markets, trust in banks has been low among lower-income customers. While this may stem from lack of familiarity, it can also be a product of having been treated poorly – even shunned – during previous visits to bank branches. As these types of encounters have reportedly happened to programme recipients using *Bank Rakyat Indonesia* branches in the past, it is essential that service providers ensure a high level of service which protects the dignity and ensures the privacy of individual beneficiaries so as to build their trust in the financial system. Without this trust, use of electronic payments will not increase significantly.

g. Ensure economic viability for service providers.

None of the current or potential programme service providers view the programme disbursements as a purely charitable endeavour. In most countries, the business case for providers of government to person scheme disbursements depends on receiving regular fees from government. These

[14] Langhan, Sarah, Craig Kilfoil, Jason Agar, and Arjan Visser. 2010. 'Alternative Payment Mechanism Feasibility Study and Recommendations'. Unpublished study report prepared for the Government of Malawi.

fees must be adequate for providers to cover costs and earn a suitable margin. Experience in other markets suggests that government cannot expect financial institutions to earn sufficient income from the float – the interest on deposits in accounts – or from cross-selling other services to beneficiaries. The fees paid to service providers vary by market but our research suggests these range from US$0.50–4.00 (and between 4–15 percent of the disbursement amount paid to beneficiaries) in the following markets: South Africa, India, Malawi, Colombia and the Democratic Republic of Congo (BFA 2013)[15]. In Indonesia, Oxford Policy Management's research (2012) suggests that past issues with *Bank Rakyat Indonesia*'s service levels may partly relate to a lack of adequate fees, given that their break-even figure with respect to the number of beneficiaries they need to serve per branch was higher than that of the post office.

Implementation principles

Following discussions with stakeholders, the following emerged as the key implementation principles:

a. **Ensure a standard disbursement process interface from the programme to all payment service providers.**

   This includes having common procedures, data formats, feedback processes and issue resolution across all payment service providers involved in the programme. TNP2K should oversee the establishment of the standard interface process from the Ministry of Social Affairs to the payment service providers and produce an associated set of procedures for electronic disbursementsin an updated manual.

b. **Provide a 'single touch' process for recipient registration where by participants can register for the payments service, complete all requirements and receive the necessary tools, such as cards, PINs, account numbers and so on, in a single session rather than in a drawn out process.**

   Ideally, activation of the payment instruments should occur on the same day as registration. Streamlining the registration process in this manner would reduce any confusion and unnecessary waiting time for beneficiaries and decrease the likelihood that they do not have access to their account in time for their initial disbursement. Under the current registration process, beneficiaries must go through multiple steps and potentially wait weeks or months for the delivery of their payment instruments, resulting in numerous issues (as outlined earlier).

c. **Separate beneficiary management from disbursement.**

   As noted, the drive to electronify programme payments does not necessarily mean making them end-to-end electronic. Rather, beneficiary management and related aspects (for example, initial and subsequent identification of beneficiaries) should be separated from the disbursement of funds. This would allow the National Team for the Acceleration of Poverty Reduction to evaluate options for revising the programme and incorporating electronic payments. Potential improvements in beneficiary management should be handled separately through discussions with the implementing unit and others concerned.

d. **Differentiate authentication from beneficiary management.**

   A tendency in some government to person schemes has been to treat the process of authentication as part of the larger beneficiary management process. However, authentication should be considered as

[15] Strategy and Principles for G2P- PKH Payments" 2013. BFA presentation to the National Team for the Acceleration of Poverty, 9 September 2013, Jakarta, Indonesia

part of the disbursement cycle since beneficiaries have to be authenticated before they receive each disbursement. The choice of one or (probably) more paypoint options under a revised programme, as outlined, will determine how beneficiaries are authenticated at different types of paypoints.

e. View reconciliation as ending with the deposit of funds into beneficiaries' account.

One of the ongoing issues with the programme has been the lengthy reconciliation process following each disbursement cycle. Facilitators are asked to provide data on each of their individual beneficiaries following each disbursement cycle, causing delays in reconciliation. The reconciliation process should be considered as terminated once the funds have been deposited into beneficiaries' accounts – instead of only when beneficiaries have cashed the funds. This would tighten up the time frames for reconciliation. It would also place the onus on the beneficiary management system since facilitators would need to be more diligent about recording beneficiaries' continued compliance with programme criteria, such as attendance at school and required meetings. This would allow a fully electronic and centralised reconciliation where payment instructions given by the Ministry of Social Affairs are reconciled against payment instructions carried out by the payment service providers. Both these sources would be fully electronic, with no paper trail required.

f. Clarify and streamline the role of the facilitator.

At present, facilitators are expected to perform a range of functions as part of the manual aspects of the reconciliation process, for example: holding regular meetings with beneficiaries; escorting them to bank branches and assisting with deposit slips; and relaying information on individuals' disbursements to local leaders. Migrating to an electronic means of payment should lighten their burden once beneficiaries are familiar with potentially new authentication methods and payment instruments, which could save the programme substantial costs. However, as noted, this may shift the onus for reconciliation onto the beneficiary management processes (rather than on the payment/disbursement components of the value chain). Facilitators would continue to play a key role as reconciliation procedures evolve.

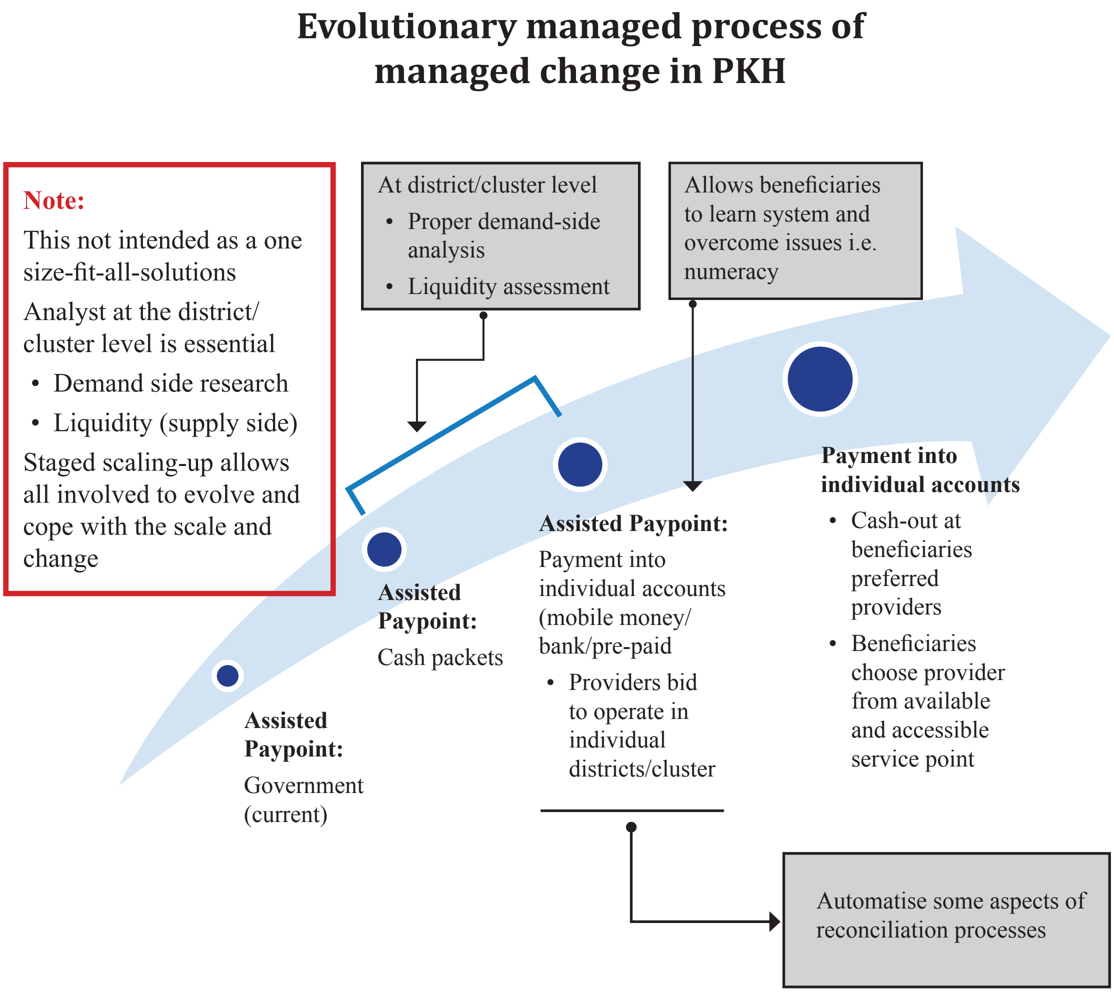
g. Consider working with other government agencies as well as donors, non-governmental organisations and other interested parties to create a single system able to disburse multiple programmes.

Other government entities also make cash transfers to the ultra-poor in Indonesia. They may also be expending resources in developing their own systems and probably duplicating the effort. TNP2K may wish to assume a leadership role in coordinating joint beneficiary management systems and disbursement mechanisms as far as possible.

h. Ensure that, where appropriate, programme recipients go through a staged process of managed change from manual to electronic disbursement rather than a 'big bang' change.

Moving towards a one-size-fits-all solution and seeking to bring electronic payments to all programme paypoints in a single change should be avoided. Rather, a gradual – evolutionary, not revolutionary – process of managed change should be embraced. Some districts, following localised research into demand-side dynamics (for example at locations where payments tend to be made so as to avoid disrupting trade) and into liquidity among potential programme payments providers, would move and into away from assisted paypoints towards payment into individual accounts at beneficiaries' preferred, self-service paypoints. This would require proper sensitisation of key personnel from TNP2K and, potentially, of staff at payment service providers, as depicted in Figure 10.

Figure 10. Evolutionary Staged Process of Managed Change in Programme Paypoints



Recommended options

In the short term (labelled 'initial options' in Table 5) we recommend that TNP2K, the Ministry of Social Affairs and the National Development Planning Agency try to arrange for all beneficiaries to open a bank or post office account into which programme payments can be made. We do not recommend taking a "big bang" approach where all manual paypoints undergo a single simultaneous transformation into self-service ones.

In the medium term and beyond, we recommend pursuing the developmental options outlined in Table 5. This relates less to selecting the "best" option and more to finding the best fit, given local conditions and bids received from potential service providers. Again, the programme network is likely to retain some assisted paypoints in the long term due to practical considerations.

Table 5. Recommended Options

	Location	Authentication device	Payment instrument ('Use…')	Value receptacle ('To pay into…')	Acquiring device to enable cash payout ('On…')
Assisted payments/ disbursements					
1	Assisted paypoint: POS Wesel	List of beneficiaries and PKH ID	Cash	None	Cash van
2	Assisted paypoint: POS Giro	List of beneficiaries and KTP ID or PKH ID	Cash	Account number (virtual, non-financial account)	Cash van
3	Assisted paypoint: BRI branch	Passbook & national ID	Cash	Bank account (BRI *TabunganKu* account)	Over-the-counter
4	Assisted paypoint	EDC	Bank card	Bank/pre-paid account	Cash van / Over-the-counter
5	Assisted paypoint	Mobile phone/ SIM	Instruction through a mobile phone	Mobile money account	Cash van/ Over-the-counter
6	Assisted paypoint	Hybrid mobile phone / barcode card	Instruction through a mobile phone or barcode card	Mobile money account	Post office, over-the-counter
Self-service payments/ disbursements					
7	Merchant	Bank card + PIN	Bank card	Bank/pre-paid account	EDC
8	On/off-site ATM	Bank card + PIN	Bank card	Bank/pre-paid account	ATM
9	On/off-site ATM	Mobile number	Token number ('cardless')	Bank/pre-paid account	ATM
10	Mobile money agent	Mobile phone/ SIM	Instruction through a mobile phone	Mobile money account	Mobile phone
11	Bank agent	Mobile phone/ SIM	Instruction through a mobile phone	Bank/pre-paid account	Mobile phone
12	Bank agent	Bank card + PIN	Bank card	Bank/pre-paid account	EDC
13	Bank branch	Bank card + PIN	Bank card	Bank/pre-paid account	EDC

Key: Current options Initial options Developmental options

Ability of programme options to address concerns under the current system

These options could potentially address many of the issues arising from the current system, as documented earlier, and in a manner that meets the stated priorities of the programme's key decision makers. It is important to emphasise that the programme is likely to continue to make cash disbursements to serve at least a portion of its beneficiaries. Figure 11 illustrates areas where adding alternative mechanisms into the programme's portfolio of disbursement approaches may improve programme performance. These options are likely to improve reconciliation processes and offer greater flexibility to beneficiaries. However, as noted earlier, the use of alternative disbursement methods alone is unlikely to reduce leakage.

Figure 11. Pros and Cons of Potential Options for a Revised PKH[16]

Location, Payment instrument Acquiring method ('Use...On...')	Expected costs	Reconciliation	Proximity	Extent of footprint	Operating hours/ flexibility around timing of cash-out	Leakage	Reliability and timeliness of payment
Pos Wesel Cash	◐	○	●	●	○	◐	○
Pos Giro cash	◐	◐	●	●	○	◐	○
BRI branch passbook over the counter	◐	◐	◐	●	○	◐	○
Assisted paypoint EDC card	◐	◐	●	●	○	◐	○
Assisted paypoint mobile phone cash van	◐	◐	●	●	○	◐	○
Assisted paypoint EDC bank card	◐	◐	●	●	○	◐	○
Mobile money agent mobile phone	●	●	●	●	●	◐	●
Bank agent mobile phone	●	●	●	●	●	◐	●
Bank agent Bank card EDC	●	●	●	●	●	◐	●
Bank branch Bank card EDC	●	●	◐	●	◐	◐	●
On/off-site ATM Bank card ATM	●	●	●	●	●	◐	◐
On/off-site ATM Token Number	●	●	●	●	●	◐	●

● Fulfills criteria ◐ Some issues ○ Does not fulfill criteria

[16] This diagram summarises the pros and cons associated with different means of payment within the Indonesian context. Since the first draft of this document, TNP2K has added another means of payment which is similar to POS Giro in that it is an assisted payment in cash. Relative to POS Giro, the new method features improved reconciliation, reliability and timeliness. With respect to operating hours and flexibility, though, it does not represent a significant improvement. We suggest that the pool of service providers be expanded to enable a wider range of providers to participate. This aligns with the key principles discussed elsewhere in this paper

Core principles recommended in addressing implementation issues

Through the numerous interactions with key stakeholders in the workshops and training sessions that the authors facilitated under this assignment as well as interviews with individual stakeholders,visits to paypoints in Jakarta and interactions with beneficiaries, a range of key implementation issues were identified for the programme to address:

- The standards to be used for the electronic payments system need to be agreed with industry. These should be in line with global electronic payment standards, as discussed.

- The personal transaction and financial data of PKH beneficiaries could be used by the implementing unit as a means of measuring internal consumption, in other words it could be used to assist with key beneficiary management aspects.

- If it were possible to identify inactive beneficiaries, the State Treasury could take back unused funds. For example, funds could possibly be returned if a beneficiary failed to withdraw funds for three consecutive payments. However, it is unclear whether the Ministry of Social Affairs has the authority to investigate individual accounts, due to privacy concerns for account holders. This issue requires clarification. In the feedback on an earlier draft of this document, one stakeholder noted that current regulation permits only post offices and banks to address this issue. However, the new electronic money regulations may affect the management of these unused funds.

- As beneficiaries potentially move onto a new system, socialisation, and education on the new system is likely to be needed to ensure a smooth transition.

- Verification of payments (reconciliation) remains a key issue. Under the present system it is difficult to determine if or when a payment has been made to the wrong account. As noted, how inactive accounts are dealt with is not clear to all stakeholders and hence requires resolution.

- Stakeholders are unclear as to whether the current disbursement management system is capable of providing additional functionality, such as integrating with payment networks and maintaining account records. Further development of disbursement management systems may be necessary to provide these benefits.

- Going forward, there appear to be several key "conditionalities" for payment via electronic means. These relate to the responsibilities of different stakeholders within the programme value chain. We received feedback on this point from only one stakeholder but the extent to which stakeholders' future roles have been established is unclear.

- Any new means of payment should be piloted before being rolled out on a wider scale. This is to evaluate how realistic the expected benefits and costs associated with any new means of payment will be.

- The procurement, timing and delivery of all payment service providers must be in accordance with state budget processes and regulations. This includes managing the process for tendering, procurement, auditing and funds management according to annual budget processes.

Key action items for TNP2K going forward

This strategy document provides a range of payment options for consideration. Going forward, these options will need to be prioritised and a way forward agreed with respect to payment methods for the programme. This does not mean selecting the “best” one or two options and seeking to implement them in all or most parts of Indonesia. Rather, we recommend evaluating and prioritising the options based on the considerations listed earlier, including the legal and enabling environment, beneficiaries’ needs and the principles for the revised programme outlined.

Once the options are prioritised, we recommend conducting research at the district level on key demand-side and supply-side considerations as well as on local infrastructure. This research is essential to ensure that district-level considerations enter into the mix of payment methods featured under the revised programme. These areas for additional research are shown in Table 6.

Table 6. Additional Research Areas

Initiative		Key components
1	Conduct a study on costs of the current scheme	Investigate: • Total cost of scheme vs. sub-components (administration, payments, beneficiary management, and so on)
2	Conduct a study on fees for PKH payments	Investigate: • Fees/commissions to pay to different types of payment services providers • Evaluate fees/commissions against available budget– the national annual budget (APBN)
3	Conduct demand-side studies	Investigate: • Consumption patterns • Desired frequency of payments • Demand for self-service vs. assisted payments/paypoints • Typical travel routes and norms with respect to cost, time • Views on the role played by PKH facilitators at present • Share of beneficiaries per area that currently have bank accounts and / or access to mobile phones • Stated needs with respect to financial services
4	Conduct supply-side studies (sub-district level)	Key components/questions include the following (note: it is expected that in different sub-districts there may be different providers from within a larger pool of providers): • Availability of suitable agents • Liquidity flows • Distances • Suitable methods for subdistrict, including appropriateness of technology for the area • Whether financial institutions are active in providing accounts at the low end of the market • Which institutions have experience of making small payments in the beneficiary areas • Which international payment providers may show an interest in the programme
5	Conduct infrastructure studies	In the areas in which beneficiaries live, the study or studies would seek to determine the following aspects[17]: • The approximate distribution of beneficiaries by distance from nearest town with bank branches • The type and number of service points (such as ATMs) that are already available • Whether agent networks already exist, for example, for paying out remittances; if not, whether there are merchants who could facilitate payments • The extent and depth of the cash economy, for example, how many businesses there are in the area and whether they have significant excess liquidity • The security situation both for locals and outsiders • Availability and cost of transport • The state of the road network • Whether there is cell phone network coverage and a supply of electricity • Availability of electricity both on grid and alternatives (for example, how many businesses already have generators or solar power)

[17] Adapted from Porteus (2009)

High-level road-map

As the findings of these research initiatives come into focus, we recommend that TNP2K create and issue a request for proposals or tenders for interested providers under the revised programme. To ensure that viable bids that reflect the principles outlined in this paperare received, it will be crucial to sensitise all possible players as to the expectations for participation in the programme going forward. It is difficult to overstate this aspect.

In our experience, for stakeholders to buy into the process of creating a programme which may look very different from the current system (for example, a self-service system with multiple providers using non-proprietary software), they need to be thoroughly engaged. More specifically they need to be part of the discussions on the implementing unit's plans for the programme and how it will interact with the current retail payments environment and recent developments in Indonesia's national payments system.

The programme implementing unit could then evaluate the bids against previously established criteria before selecting its preferred vendors.

We suggest the detailed timescale shown in Table 7 to achieve this.

Table 7. Indicative Timescale Associated with the Roadmap on the Way Forward

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Review the findings and recommendations of the feasibility assessment in collaboration with additional stakeholders as necessary	x					
Prioritise the options and sign off on the recommended way forward		x				
Commission recommended studies on (1) demand-side considerations and (2) agent/ merchant liquidity – both at the local level –as well as studies on scheme costs and on fees to providers (these last two could possibly be merged)		x	x			
Continue to sensitise all possible players so they can also consider how to address the request for proposals		x	x	x	x	
Develop criteria for evaluating bids			x			
Create and issue request for proposals for potential service providers under the revised PKH. The tendering process should be open to multiple service providers in conformance with the key principles espoused in this document				x	x	
Award bid to chosen service providers in each district						x

Disbursement Management System Requirements Matrix

The following requirements matrix encompasses relevant requirements for an all-inclusive disbursed "self-service" payment mechanism involving multiple distribution channels. It is not specifically drawn up for incremental programme designs, as recommended in this strategy paper, but it is designed to be modified according to the current needs of the programme.

See section N below for requirements for payment service providers.

A. General requirements

Minimum technical requirements:

a. The system must support *Bahasa Indonesia* for all management interaction, operations screens, messages and reports.

b. There must also be a multiple language interface for any recipient using messaging, where messaging is done in the language selected when the recipient was registered in the management information system.

c. All human interfaces with the system must work through industry-standard web browsers.

d. System interfaces to the bank switching infrastructure must support ISO 8583 and XML structured messages and must minimally meet the interface specifications of ATM Bersama, ATM Link, ATM Prima and Alto.

e. The disbursement management system (DMS) should interface with a settlement bank.

f. The disbursement management system should interface with the programme's management information system from which it receives disbursement batch files and authentication information (for field campaigns) and account information for electronic funds transfers.

B. Multi-payer, multi-scheme and multi-programme management

a. The disbursement management system must provide facilities to operate and account for multiple entity to person disbursement schemes, operated by various organs of the Government of Indonesia as well as by private and donor organisations, collectively known as 'G2P entities'.

b. The single disbursement management system will thus be used by multiple entities to pay to individuals. This is to optimise the use of field agent networks and produce as high a volume of cash-out activity as possible for disbursal agents. This will increase volumes, making disbursal viable as a business, and potentially reduce disbursal costs due to the higher volumes, thus increasing operational efficiencies.

c. Essentially payment will be made through two modes:

- Electronic funds transfer (batch or real-time) into recipient's nominated electronic account facilities at financial institutions, including; banks, BPRs, microfinance institutions and electronic-money issuers. Recipients can then use the facilities available from their financial institution to withdraw cash, be it using branches, agents, ATMs, EDC terminals or mobile payment systems. Furthermore the recipients can use their ATM cards issued by the financial institution to purchase goods directly from merchants.

- Bulk payment field campaigns using field terminals (traditional batch disbursal campaigns).

d. The system must be able to accept disbursement feeds from G2P entities, as well as from entities paying salaries and/or wages or from other similar payment schemes. This will allow for paying work-generation scheme wages or allowances and other disbursals that need to reach poor and rural populations. As most of these schemes address the same constituents, using one disbursal system and thus all the disbursal channels available makes for optimal use of the national asset.

e. Each G2P entity must be able to disburse multiple different programmes through the disbursement management system.

f. Each disbursement batch must link to a disbursement campaign (a grouping of sub-district payment locations for bulk payment and a single national campaign for electronic account crediting). This must in turn link to a disbursement programme and each programme must link to a G2P entity. The system must allow for multiple G2P entities.

g. Disbursement batch file feeds from multiple G2P entities must be able to be accepted and processed and campaigns managed.

h. Each disbursement batch file must be matched with a credit to the disbursement management system account at the settlement bank.

i. The disbursement management system should provide the requisite structures, management facilities and controls to ensure that disbursement campaigns are backed by funds prelodged at the settlement bank. Also, the necessary system controls must be in place to ensure that only authorised persons are involved in disbursement campaigns.

C. Recipient authentication instruments

The programme authentication system should supply the authentication details to the disbursement management system.

- Field campaign authentication

The system should support the registration and certification of recipients' authentication credentials for field campaigns, as shown in Table 8.

Table 8. Authentication Methods for Use in Field Campaigns

Authentication instrument / method	Detail	For use in	Requirement
Chip and biometric card	A card issued by the programme that contains biometric details (picture, fingerprint and possibly iris scan)	Field campaigns	Provide as option
Biometric (live fingerprint presentment or iris scan)	Use of global standard fingerprint and/or iris registration and validation technology	Field campaigns	Provide as option
ID document	Insert valid Indonesian ID documents – KTP, eKTP or othervalid Indonesian ID document (where available). While PKH / Social Protection cards are currently held by all beneficiaries, these do not meet the legal requirements for cards which are used in the banking sector (pending further clarification regarding simplified Customer Due Diligence)	Field campaigns	Mandatory
Proxy letter authorising collection on behalf of the recipient	Make a decision about this	Field campaigns	Mandatory

- Electronic disbursement

The system should support the following information for electronic payment to a recipient's account:

- Institution where the account is kept, indicated by an institution EFT routing code;
- Account number of the individual (or phone number) to be credited; and
- The name of the individual.

The programme management information system should maintain destination payee information and programme staff should process, register and, over time, manage the recipient's account data.

D. Disbursement team management

The system should provide for the management of field disbursal teams:

a. Register the team and team members;

b. Access profile allocation;

c. Define roles and system profiles associated with the roles; and

d. Supervise, oversee and control the processes through a hierarchical structure.

E. Campaign management

a. The disbursement management system should have a campaign management facility. Campaigns can be released, monitored and reconciled from this facility.

b. Where field agents for banks and mobile money schemes are involved, the agents' cash availability needs to be managed. Based on the campaign, where possible, assessments of the demand for cash needs to be made so the agents are aware of how much cash they need to have at hand at any one time.

c. Where manual disbursements are made, there needs to be a facility whereby disbursements that were not made during the previous campaign can be added to the current campaign. Business rules may dictate that all unmade disbursements are returned to the programme (the disbursement agency) and a facility to perform this action must be available.

d. Where EFT payments do not reach the designated account a returns process must be available.

e. A facility to report all successful and unsuccessful disbursements to the disbursing agency must be available.

f. Campaign scheduling for the EFT payment method across sub-districts, where possible, should be available to reduce the demand for cash.

F. Commission management

a. The disbursement management system should be able to calculate the fees due from disbursing agencies for each type of disbursement campaign and to identify the channels used.

b. Where disbursement campaigns use field teams, the system must be able to establish a composite charge based on location and team members used or alternatively levy a contracted rate per campaign.

c. Where electronic funds are transferred to accounts at banks and mobile network operators and fees need to be paid, the disbursement management system must have a means of calculating the fee by the destination code. This would mean, for example, that when operators' agents are used to dispense cash and are due a commission, the fee can be accounted for and charged to the disburser. Provision for using contractually-agreed rates should be provided.

G. Funds management

a. The disbursement management system must have a facility to receive notification that the funds to back up the disbursal campaign have been made irrevocably available in one its settlement bank accounts.

b. There should be an interlock so that no disbursal campaign is possible without the funds being available.

c. Where EFT payment is used for disbursal, the system should provide reconciliation facilities to balance all transfers made against the amounts paid out by the settlement bank.

d. When a field disbursement campaign is released, the system must generate the correct bulk EFT transfer to the correct bank location where the disburser will collect the cash to be disbursed.

e. After field disbursement campaign activity, the system must provide facilities to reconcile the disbursements made against the cash advanced and cash returned into the settlement bank account.

H. Notification management

a. The disbursement management system should provide a recipient notification system.

b. The system should operate in two modes:

- SMS notification for recipients who have a registered mobile number on the scheme to inform them that they have received an electronic disbursal in their nominated and registered value store/account and that they can proceed to either withdraw the value in cash or use some electronic payment method to pay for goods and services using the disbursed amount.

- SMS notification of recipients of the date of a cash disbursal campaign. The notification would operate at two levels – to the local authorities and community heads and to those recipients who have registered their mobile phone number in the disbursal system. The messages can be different for the different levels. Facilities such as communicating the disbursal team's contact number should be included.

I. Entitlement management and credential enrolment

All entitlement management and credential enrolment should be done in the programme management information system. Identity credentials and destination EFT accounts should also be managed in this system. All necessary authentication credential information needs to be securely passed to the disbursement management system in a secure wrapper, as part of each disbursement campaign. The disbursement management system should retain the information only long enough to ensure authentication for that specific campaign.

J. Campaign reporting

Country-wide, regional and individual disbursement campaign reports should include:

- Planned amount and number of transfers;
- Total amount transferred (value and number);
- Total amount not transferred (value and number);
- Total number of recipients that collected the transfer;
- Total number of recipients that did not collect their transfer; and
- Prior transfers missed and collected this cycle (value and number).

Users must also be able to design and run ad hoc report queries using a reporting tool.

Dispute resolution

A dispute resolution process needs to be laid down in the disbursement management system where by disputes can be logged by dissatisfied disbursal receivers and/or agents and then managed to resolution.

K. System testing

The disbursement management system supplier should provide full and detailed user acceptance testing procedures and manuals.

L. Field disbursal terminals/PCs

The disbursement management system supplier should also provide field terminals that can run field disbursal operations. The terminals need to support the authentication means listed under ‘Field campaign authentication’ in section C of the matrix.

The terminals should be capable of running for ten hours between charges. Offline capability is desirable if compatible with selected payment method.

References

Bank Indonesia (BI). 2011. *Payment, Clearing, and Settlement Systems in Indonesia*. Jakarta, Indonesia: Bank Indonesia. Retrieved from http://www.emeap.org/emeapdb/upload/WGMeeting/Payment,clearing%20and%20settlement%20systems%20in%20Indonesia.pdf.

Bankable Frontier Associates. 2006. *Scoping Report on the Payment of Social Transfers through the Financial System*. Paper commissioned by Department for International Development (United Kingdom). Retrieved from http://bankablefrontier.com/wp-content/uploads/documents/report-V4.0.pdf.

CGAP (Consultative Group to Assist the Poor). 2011. *G2P Research Project: Columbia Report*. Washington D.C: CGAP

———. 2011. *G2P Research Project: South Africa Report*. Washington D.C: CGAP

———. 2011. *G2P Research Project: Brazil Report*. Washington D.C: CGAP

———. 2011. *G2P Research Project: Mexico Report*. Washington D.C: CGAP

Retrieved from http://www.cgap.org/publications/all?topic%5B%5D=26&year%5Bvalue%5D%5Byear%5D=2011

Department for International Development (DFID) and Concern Worldwide. 2007. *Dowa Emergency Cash Transfer (DECT) Wider Opportunities Evaluation and Recommendations*. London: Department for International Development and Concern Worldwide.

European Union / Save the Children. 2012. 'Innovative Approaches to Cash Delivery for the Indonesia Social Cash Transfer Programme'.

Government of Malawi. 2013. *SCTP transfer manual*. Lilongwe: Ministry of Gender, Children, Disability and Social Welfare.

Government of Malawi. 2013. *Mtukula Social Cash Transfer Program: Technical Annex D: Transfer Manual*. Lilongwe: Ministry of Gender, Children, Disability and Social Welfare.

PRSF. 2011. *Poverty Reduction Support Facility Inception Report*. Retrieved from http://aid.dfat.gov.au/countries/eastasia/indonesia/Documents/prsp-inception-report-pd.pdf.

Hutagalung, Stella A., Sirojuddin Arif, and Widjajanti I. Suharyo. 2009. 'Problems and Challenges for the Indonesian Conditional Cash Transfer Programme, *Program Keluarga Harapan* (PKH)'. SPA working paper. Jakarta: Social Protection Asia.

International Monetary Fund (IMF). 2012. *Indonesia: CPSS Core Principles for Systemically Important Payment Systems*. IMF Country Report no. 12/187. Washington, DC: International Monetary Fund. Retrieved from http://www.imf.org/external/pubs/ft/scr/2012/cr12187.pdf.

Kharisma, Dinar Dana. 2008. 'Case Study of PKH in Sumba Barat and Kedir'. Research report prepared for the Conference on Asian Social Protection in Comparative Perspective, Singapore, 7–9 January 2008, National Development Planning Agency, Jakarta, Indonesia. Retrieved at http://www.welfareacademy.org/pubs/international/policy_exchanges/asp_papers/1201.pdf .

OXFAM Malawi. 2011. *Market Situation Analysis for Districts of Malawi Affected by Food Deficits during the 2010/11 Consumption Year***.** Lilingwe, Malawi: OXFAM.

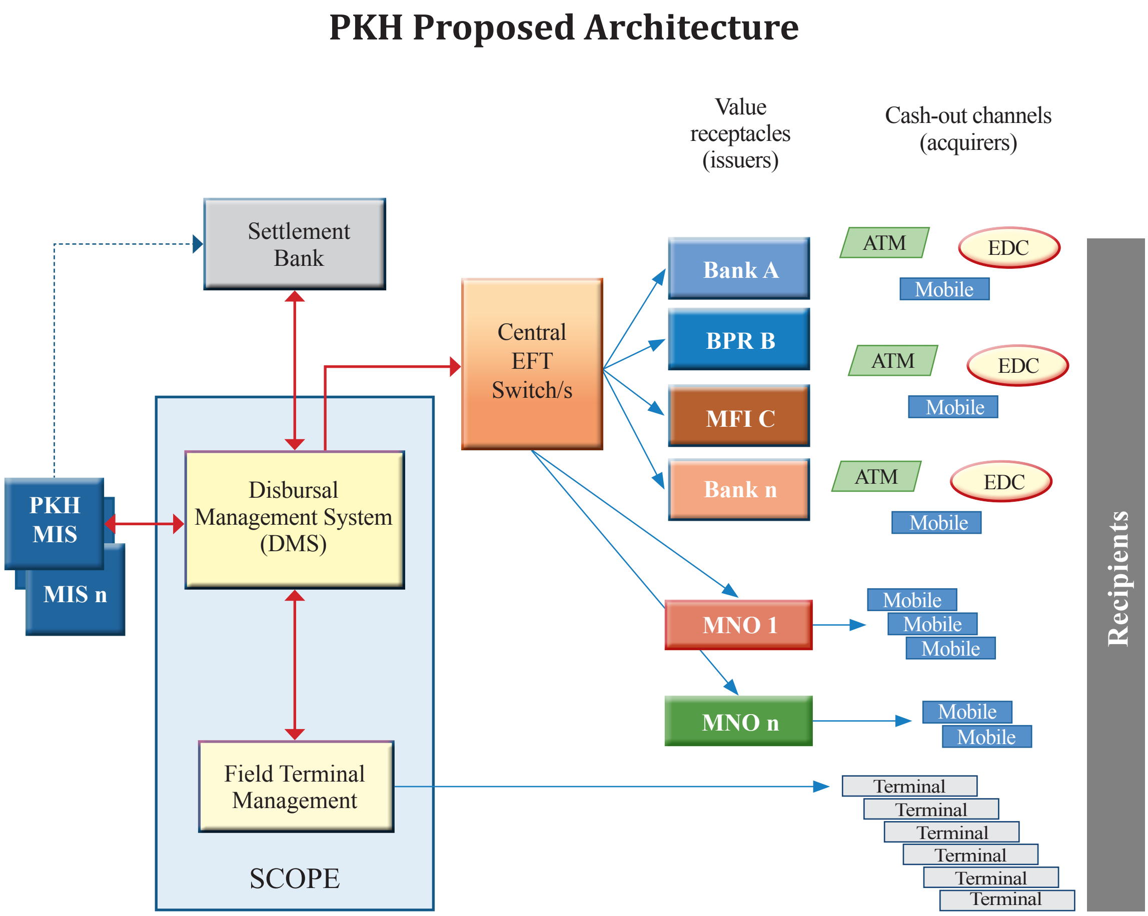
Oxford Policy Management (OPM). 2012. *Disbursement of Social Cash Transfers through Bank Accounts*. Jakarta, Indonesia: The National Team for the Acceleration of Poverty Reduction (TN2PK).

Porteus David. 2009. *Designing and Implementing Financially Inclusive Payment Arrangements for Social Transfer Programmes*,' London: Department for International Development. Retrieved from http://www.microfinancegateway.org/sites/default/files/mfg-en-toolkit-designing-and-implementing-financially-inclusive-payment-arrangements-for-social-transfer-programmes-dec-2009.pdf.

World Food Programme, Oxfam/Malawi Vulnerability Assessment Committee (MVAC). 2012. *Cash Delivery Service providers in Malawi, Market Situation Analysis 2012.*

Annex A: Proposed system architecture and overall scope

The scope of this requirements framework is the supply of the disbursement management system and the field terminal management system. The scope excludes the programme management information system but includes the link to this system (and any other management information systems necessary).



Assumptions and external scope

a. Managing entitlement and generating disbursal lists are out of the scope ofthe disbursement management system. These tasks will be performed separately through the programme's management information system (PKH MIS). The disbursement management system will be linked to the programme' smanagement information system using a defined protocol set so it can receive authorised disbursal campaign lists.

b. The disbursement management system will not provide planning tools – it is purely an execution tool for campaigns that are already planned and scoped. The disbursement management system receives disbursement lists and manages disbursements against these lists.

c. If poor identification, entitlement assessment, enrolment and beneficiary management processes exist in the programme's management information system, automating the disbursement system and introducing electronic payment technology will still result in paying the wrong people, and will do so more efficiently.

d. The following activities take place in the management information system and are not part of the disbursement management system:

    - Evaluating eligibility (verified means test, unverified means test, proxy means test, community targeting and self-targeting);

    - Planning disbursement campaigns – dates, extent (number of beneficiaries), type of method used, locations and execution agents.

e. PKH will work with other government agencies as well as donors, non-governmental organisations and other interested parties to create a single system able to disburse multiple programmes and there by optimise the use of the available channels and manual field disbursement.

f. The chosen solution will be aligned with global electronic payment standards. This will help ensure that procedures of access, authentication and authorisation are practised and enforced. The system will be interconnected with and thus lever off the national infrastructure, for example, national switch and linked ATMs and/or EDC. This will allow the use of interoperable payment instruments such as bank cards at all points where electronic transactions are possible in Indonesia.

g. A standard disbursement process interface from the disbursement management system to all payment service providers needs to be ensured. This includes having common procedures, data formats, feedback processes and issue resolution across all payment service providers involved in the system. The programme will oversee the creation of the standard process interface and associated set of procedures as it produces an updated manual for electronic disbursements.

h. The system needs to achieve 'single-touch' process for recipient registration, performing key aspects such as issuing authentication credentials (PIN), registering mobile station international subscriber directory numbers (MSISDN) of phones and issuing any ATM cards simultaneously during the single session.

i. Existing infrastructure should be leveraged as much as possible and the chosen solutions fully integrated into the national electronic payments infrastructure.

j. Proprietary (closed/unique) technology needs to be avoided and participation in the disbursement management system needs to be open to as many service providers as possible.

k. Disbursement management system recipients should be able to go through a stepped process of managed change from manual to electronic disbursement where appropriate, rather than undergo a "big bang" change.

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Program Keluarga Harapan (PKH) is a Conditional Cash Transfer programme that delivers benefits to 2.3 million families in Indonesia. Payments to these families are currently made through a manual process involving the Indonesian Post Office. This paper discusses the opportunities and considerations in evaluating alternative payment mechanisms and recommends a strategy for moving to payment methods that are more efficient for the programme, easier to access for beneficiaries and provide the potential for financial inclusion through savings accounts or other financial instruments such as pre-paid cards or mobile money.

This strategy would involve an evolutionary process that must address not only payment technology issues, but also a shift from a "managed" disbursement process, whereby beneficiaries rely heavily on facilitators in order to access their benefit funds, to a "self-service" process, in which beneficiaries are able to select the most appropriate time, place and method to access their funds. The paper also proposes key principles and a requirements matrix to be considered when selecting payment mechanisms.

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