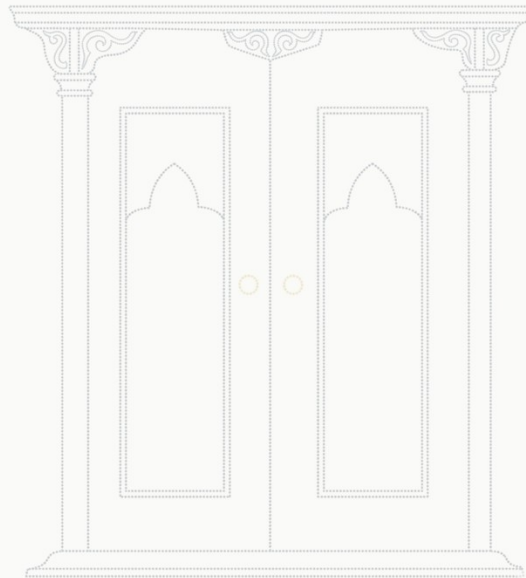


THE INVISIBLE FILTER

*How Millions of Bankable Households Disappear
from Indonesia's Housing Finance*



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MAY 2026

Disclaimer

The author conducted this study as part of the program of professional education at the Goldman School of Public Policy, University of California at Berkeley. This paper is submitted in partial fulfillment of the course requirements for the Master of Public Affairs degree. The judgments and conclusions are solely those of the author and are not necessarily endorsed by the Goldman School of Public Policy, by the University of California, or by the client.

Acknowledgements

Alhamdulillah. All praise is due to God, the Most Gracious, the Most Merciful.

I am grateful to the Office of Chief Economist Bank Mandiri, and in particular to Dendi Ramdani and Mamay Sukaesih, for the research engagement that made this study possible and for trusting an analyst to decode and think through the population-scale dynamics of Indonesia's housing finance.

To my supervisor, Fan Dai, and to Hector Cardenas, thank you for your guidance and feedback throughout this process. And to Dan Acland, Dan the Man, whose teaching built my interest in economics and public policy from the ground up: this paper exists because you shaped the way I think.

To Professor Gustavo Manso at Haas, whose corporate finance teaching let me see beyond public policy and grounded my analysis in the financial architecture that makes markets work.

To Sully Kosasih, my mentor, thank you for showing me what thoughtful leadership looks like.

To my MPA friends, Sadia, Gabe, Shogo, and especially Yong Kiat, who taught me skills that were genuinely life-changing, thank you for making this program worth every day.

To the Strada Boys: Mas Jehan, Firza, William, Fahrel, Edo, and Mas Adrian, a “tongkrongan” inspired by the Berkeley Mafia and the Chicago Boys! Held together by jokes and too many discussions about economics, development, law, and how to get Indonesia to the world's fourth-largest economy. You guys are the core of why I found anything in Berkeley interesting, simply because I wanted to discuss it with you guys every day at Caffee Strada.

To Poeri Athletic Club, my longest “tongkrongan”, who shaped my knowledge hungry character and taught me to always be true to myself.

To my family, my wife, Shabila Novia, who carried more than her share so I could carry this. To my son, Sheldon, who made every deadline feel worth meeting. I will use all my power to help you get a Nobel Prize someday, but first, let's get you to sleep through the night, haha. To my father, Nur Hasan Achmad, and my mother, Amalia Rahmawati, who made all this possible long before I knew it. And to my brothers, Mas Alfath and Mas Alqi, for being there.

Lastly, to everyone who supported me in ways big and small but whom I could not mention here, know that your kindness and presence were deeply appreciated and never forgotten.

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Context and Purpose

This report was developed in response to a research engagement with the Office of Chief Economist at PT Bank Mandiri (Persero) Tbk, Indonesia's largest bank by assets and one of the primary distributing banks for the government's subsidized mortgage program (FLPP).

The Office of Chief Economist is exploring how data-driven analysis of household creditworthiness can inform Mandiri's mortgage lending strategy, improve alignment with regulatory design, and identify underserved segments within the program-eligible population.

The study constructs a population-scale bankability map using nationally representative survey data, identifies where bank-level screening differs from regulatory intent, benchmarks against international housing finance instruments, and evaluates concrete alternatives to close the gap.

While the analysis is conducted independently and does not represent Mandiri's institutional position, the findings are designed to provide actionable intelligence for the bank's subsidized mortgage operations, inform strategic conversations with regulators and guarantee institutions, and contribute to Mandiri's broader role in Indonesia's housing finance ecosystem.

Subsequent chapters map the eligible population, diagnose institutional screening patterns, benchmark against Colombia, India, Mexico, and China, evaluate two policy alternatives, and present conclusions with limitations. The analytical framework follows the Eightfold Path methodology for policy analysis.

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Glossary

FLPP	<p>Fasilitas Likuiditas Pembiayaan Perumahan (Housing Finance Liquidity Facility).</p> <p>The government’s subsidized mortgage program offering below-market interest rates for low-income households.</p>
MBR	<p>Masyarakat Berpenghasilan Rendah (Low-Income Community).</p> <p>The target population for FLPP.</p>
SUSENAS	<p>Survei Sosial Ekonomi Nasional (National Socioeconomic Survey).</p> <p>BPS’s annual household survey, the primary data source for this study (Maret 2025 wave).</p>
BPS	<p>Badan Pusat Statistik (Indonesia’s national statistical agency).</p>
BP Tapera	<p>Badan Pengelola Tabungan Perumahan Rakyat (Housing Savings Management Agency).</p> <p>Manages FLPP liquidity and sets eligibility parameters.</p>
OJK	<p>Otoritas Jasa Keuangan (Financial Services Authority).</p> <p>Regulates banking and sets credit assessment standards.</p>
SLIK	<p>Sistem Layanan Informasi Keuangan (Financial Information Service System).</p> <p>Indonesia’s credit bureau, managed by OJK.</p>
POJK 42/2017	<p>OJK regulation mandating the 5C credit assessment framework (Character, Capacity, Capital, Collateral, Condition) for commercial bank lending.</p>
PermenPKP 5/2025	<p>Ministerial regulation setting zone-based income ceilings for FLPP eligibility</p> <p>(Rp 8.5M to Rp 14M per month).</p>
Kepmen PUPR 689/2023	<p>Ministerial decree setting maximum house prices for subsidized housing by zone.</p>
Jamkrindo	<p>PT Jaminan Kredit Indonesia.</p> <p>The state-owned credit guarantee corporation providing partial guarantees for FLPP mortgages.</p>
Bankable	<p>Composite score of 0.65–0.699</p>
HC Bankable	<p>High-Confidence Bankable with composite score of ≥ 0.70</p>
Bankable+	<p>Composite score ≥ 0.65.</p> <p>Combines the High-Confidence Bankable (≥ 0.70) and Bankable (0.65–0.699) tiers.</p>

Creditworthiness (CW)	The independent weighting scheme (0.10/0.20/0.40/0.30) emphasizing financial track record and risk buffers.
Mandiri-product (MP)	The weighting scheme (0.17/0.50/0.33/0.00) reverse-engineered from Mandiri's published KPR Sejahtera screening criteria.
Mandiri-credit-team (MCT)	The weighting scheme (0.40/0.20/0.30/0.10) derived from expert judgment of a Mandiri credit officer.
Affordability ratio	Monthly mortgage installment divided by monthly household expenditure. Technically an installment-to-expenditure ratio, not a debt-to-income ratio, because the denominator is EXPEND.
KPR	Kredit Pemilikan Rumah (Home Ownership Credit/Mortgage).
NPL	Non-Performing Loan.
FNG	Fondo Nacional de Garantías (Colombia's National Guarantee Fund). Provides partial credit guarantees for housing loans.
Account Aggregator (AA)	India's consent-based financial data sharing framework enabling income verification from multiple sources.
INFONAVIT	Instituto del Fondo Nacional de la Vivienda para los Trabajadores (Mexico). Employer-funded housing finance institution.
HPF	Housing Provident Fund (China). Payroll-linked savings and lending system for housing.

Executive Summary

Indonesia does not have a shortage of bankable borrowers for subsidized housing. **It has a screening architecture that makes them invisible.** Across the country, 12.6 million families still do not own a home. The government's flagship program targets three million homes, and the subsidized mortgage liquidity facility (FLPP) that finances new ones disburses roughly 350,000 loans per year. The question is not whether more families qualify. Millions do. This paper asks how, and the answer is not where policymakers have been looking.

We start with the population nobody had counted. Using nationally representative household microdata from 2025, we apply three regulatory filters to 74.1 million Indonesian households and identify **5.770 million that meet every FLPP eligibility criterion, the first time this number has been estimated at this level of granularity from national survey data.** Every one of them passes the regulatory bankability screen, because the regulation was designed to be inclusive. The harder question is whether these households could sustain a 20-year mortgage, and the answer depends on who is making that judgment.

The constraint is downstream, in how financial institutions decide who qualifies. We first construct four creditworthiness dimensions grounded in the credit assessment framework mandated by the financial services authority, capturing income adequacy, employment stability, financial track record, and risk buffers. We then apply four weighting schemes to these dimensions, each representing a different institutional perspective on what matters most in mortgage lending.

Screening concentrates on employment formality, which receives half the effective weight in the bank's criteria, while risk buffers, the dimension where household vulnerability is highest, receives none. Banks have reason to be cautious: the small-house mortgage segment carries the highest default rate of any housing loan category, and credit growth in that segment is contracting. In the absence of verified income data for informal workers and with thin loan performance history, formality is the most cost-effective screening signal available. The question this paper asks is not whether banks are screening too tightly, but what would allow them to extend further within their risk tolerance. Under every definition of creditworthiness we tested, the pipeline exceeds FLPP's annual capacity by 3.4 to 10.0 times. The opportunity is large enough to justify building the infrastructure that would let banks serve it.

Three root causes emerge: a concentration of screening weight on employment formality, driven by limited verification alternatives; a verification gap where the credit bureau system captures harmful records but cannot verify positive financial behavior; and a fiscal constraint where even the most conservative pipeline exceeds annual disbursement capacity by 3.4 times.

Four countries show what different instruments look like. Colombia absorbs screening risk through partial credit guarantees. India's Account Aggregator framework creates consumer-directed income verification. Mexico funds housing through mandatory employer contributions rather than annual budgets. China's Housing Provident Fund is the cautionary case: a payroll-linked fund that only covers formal workers, meaning the same workers excluded from housing finance in

Indonesia would be excluded there too. The most immediately actionable finding is closer to home: the national credit guarantee corporation's published FLPP terms are more restrictive than current regulation, with income ceilings roughly half of what the regulation allows.

Two alternatives were evaluated against the status quo using six weighted criteria. Alternative A fixes existing instruments: recalibrate the guarantee to match current regulation and extend the mortgage tenor from 20 to 25 years. **The combined effect lifts households scoring as creditworthy from 2.652 million to 3.983 million, a gain of 1.331 million.** These estimates represent upper bounds: they assume the income verification gap described in Alternative B is resolved. This requires no legislation, only administrative alignment. Alternative B builds new instruments: digital income verification infrastructure and fiscal expansion toward self-sustaining housing finance. While Alternative A is implementable in the near term (scoring 4.40 out of 5.00), Alternative B requires regulatory development and longer lead times (scoring 2.85). The sequencing is practical: start with what exists, then build what is needed.

This study provides the first population-scale eligibility estimate for Indonesia's subsidized mortgage program. It introduces a four-perspective methodology that shows **how the choice of screening lens determines how many households appear bankable, and which ones become invisible.** It maps the geographic distribution, with 51% of the pipeline sitting in just 20 districts. And it quantifies what fixing existing instruments would recover. **The screening mechanism is now visible. Its distributional consequences are now measurable.**

Chapter 1

The Government Housing Finance Challenge

1.1 Paper vs. Reality

Indonesia's Program 3 Juta Rumah (Three Million Houses Program) is the government's most ambitious housing initiative to date, targeting three million homes annually across four segments and four delivery channels. The Negara (state-built) segment (186,000 units, 6.2% of target) channels government budgets directly into public construction. The Swadaya (self-help) segment (1.27 million, 42.4%) supports households building with their own resources. Gotong Royong (mutual cooperation) (27,000, 0.9%) relies on corporate and community philanthropy. The largest segment, Pengembang (developer-driven) (1.52 million, 50.5%), flows through channels where banks lend to households and decide who qualifies.

This study examines that banking channel. Within the developer-driven segment, the government's primary mortgage instrument for low-income households is the Fasilitas Likuiditas Pembiayaan Perumahan (FLPP, Housing Finance Liquidity Facility), a subsidized mortgage program offering below-market interest rates, a long tenor, and a minimal down payment. Section 1.3 describes the program's full architecture. The program targets 350,000 units annually, but the eligible population is far larger than the program can absorb in any given year. Using SUSENAS 2025 (the national socioeconomic survey) microdata, we identify 5.770 million households that meet all three regulatory eligibility filters: income within zone-specific ceilings, house price within PUPR (Ministry of Public Works and Housing) affordability limits, and non-homeowner status. Of these, between 2.7 million and 3.5 million are potentially bankable depending on which screening lens is applied. **With pipeline multiples of 3.4 to 16.5 times annual capacity depending on which definition of creditworthiness is applied, the question is not whether enough qualified borrowers exist, but who gets selected and who gets left out.**

The selection mechanism is largely invisible. No single actor designed it. It arises from the interaction of regulatory eligibility rules, bank-level credit screening practices, and program capacity limits. Regulation sets broad boundaries. Banks, working within those boundaries, apply their own criteria to decide which applicants get mortgages. The resulting filter may not align with the program's intended reach, but no one in the system sees the full pattern. **This study makes the filter visible.** We build a population-level bankability map, identify where and why bank screening differs from regulatory design, benchmark against international practice, and evaluate concrete alternatives to close the gap.

1.2 Why Housing Access Matters

Housing is the single largest asset most families will ever hold. For low-income households, a formal mortgage is not just a path to shelter but the primary vehicle for building wealth across

generations. A family that secures a home locks in a fixed monthly payment that declines in real terms over 20 years, while the asset itself appreciates. A family that does not remains in rental arrangements where monthly costs rise with inflation and no equity accumulates. **The difference compounds over a lifetime and carries into the next generation.**

Exclusion from homeownership also constrains labor mobility. Renters can relocate to follow economic opportunity, but they build nothing durable. Homeowners build equity but cannot easily move. For low-income households, the worst outcome is neither: informal tenure, where families stay in place without legal security, unable to leverage their housing for credit, investment, or intergenerational transfer. The asset exists physically but not financially.

The stakes extend beyond individual households. Indonesia's urban population has reached roughly 59% of the national total, with cities generating the majority of GDP growth. Rapid urbanization increases demand for formal housing, but when access to mortgage finance is restricted, households do not simply wait. They settle informally. The government identified approximately 38,000 hectares of informal settlements as of 2015, housing half of low-income urban families (World Bank, n.d.). These communities often lack clean water, sanitation, and secure land tenure, creating long-term costs for public health, disaster resilience, and urban planning that governments eventually bear. Housing in Indonesia is less affordable than in roughly 85% of countries globally, with a median apartment requiring 18.9 years of median family income to purchase, more than double Malaysia's 8.5 years (Numbeo, 2024, as cited in Yudhistira et al., 2024).

The scale of unmet need is large. 12.57 million Indonesian families do not own a home and another 16.59 million live in housing unfit for habitation (Kementerian PKP, 2026). **Of those 12.57 million families lacking homeownership, this study identifies 5.770 million who meet all FLPP eligibility criteria, of whom 2.7 to 3.5 million are potentially bankable, and 350,000 are served annually.** The funnel narrows at every stage, but the sharpest narrowing happens not at the regulatory gate, which all 5.770 million pass, but at the bank screening stage, where the criteria applied vary by institution and are not visible to policymakers.

Banks have reason to be cautious. Mortgage lending for small houses ($\leq 21 \text{ m}^2$, the building-size category most comparable to FLPP housing) carries the highest non-performing loan (NPL) rate of any KPR (kredit kepemilikan rumah, housing mortgage) segment at 5.23%, nearly double the system-wide KPR average of 3.01%, with credit growth in that segment contracting at -4.8% year-on-year (Bank Indonesia, April 2025, as cited in Bank Mandiri, Office of Chief Economist, 2025). **The segment where housing policy has its greatest ambition is also the segment where bank exposure is highest.** However, FLPP's subsidy design, a 5% fixed rate, 20-year tenor, and government-backed liquidity, functions as built-in credit enhancement that substantially changes the risk profile of this segment. The question this study asks is whether banks screen FLPP applicants as if that credit enhancement exists, or as if they carry conventional small-house risk.

1.3 FLPP Program Architecture

FLPP channels government funds into mortgage lending through a division of roles. BP Tapera, the national housing savings fund, is not a bank. It acts as the liquidity provider, channeling budget allocations into a pool that participating banks draw from when they originate FLPP mortgages. Banks select the borrowers, underwrite the loans, and bear the credit risk. **The government provides the money, banks decide who gets it, and the credit guarantor determines who can be guaranteed.**

BP Tapera allocates its liquidity through a quota system, assigning each participating bank a specific number of units it can disburse. For 2026, the national quota is 350,000 units backed by Rp 37.1 trillion in available funds. BTN (Bank Tabungan Negara, the state housing bank) received 172,000 of those units, nearly half the national allocation. The remaining quota is distributed among 42 other banks. In total, 43 banks signed cooperation agreements with BP Tapera for 2026, up from 40 in 2025 (BP Tapera, 2026).

The loan terms are standardized. Borrowers receive a 5% fixed interest rate for a 20-year tenor with a down payment as low as 1%, and the transaction is exempt from value-added tax (PPN, pajak pertambahan nilai). These terms are significantly more favorable than conventional KPR (Kredit Pemilikan Rumah, Home Ownership Credit/Mortgage) products, where interest rates typically range from 7% to 12% and down payments start at 10–15%.

Three regulatory instruments define who is eligible. First, PermenPKP 5/2025 (Ministerial Regulation on Public Housing) sets income ceilings across four zones, ranging from Rp 8.5 million per month in Zone 1 (Java outside Greater Jakarta and Sumatera) to Rp 14 million in Zone 4 (Greater Jakarta). Second, Kepmen PUPR 689/2023 (Ministerial Decree on Public Works and Housing) sets maximum house prices across five zones, from Rp 166 million in Zone 1 to Rp 240 million in Zone 5 (Papua). Third, Peraturan BP Tapera 9/2021 requires that borrowers do not already own a home, fall within the applicable income ceiling, and have not previously received a housing subsidy. The lower bound of the eligible population is set by a standard banking prudential threshold: the monthly mortgage installment must not exceed 30% of household expenditure. This is not a regulatory requirement but an analytical construct we use to define the affordability floor. Chapter 2.1 constructs the full eligibility funnel in detail.

A credit guarantee mechanism exists through Jamkrindo (Jaminan Kredit Indonesia, the national credit guarantee corporation), but its current terms do not fully align with FLPP's regulatory parameters. Jamkrindo's published income ceilings (Rp 4 million for landed houses and Rp 7 million for apartments) are more restrictive than PermenPKP 5/2025's Rp 8.5–14 million range, and its requirements for formal documentation and minimum one-year employment tenure have no basis in FLPP regulation. This misalignment is examined in Chapter 4 and addressed as a policy alternative in Chapter 5.

In 2025, the system disbursed 278,868 FLPP mortgages, reaching 79.7% of the 350,000-unit target. Bank Mandiri, the institution examined in this study's institutional diagnosis, originated 11,122 units or 4.0% of the total (BP Tapera, 2026). For 2026, BP Tapera has raised the informal-sector

allocation to 15% per participating bank, up from 10%, a signal that the program's reach into the informal workforce has been limited. Whether banks use that allocation depends on the screening criteria they apply, which is the subject of this study.

1.4 Research Questions

The preceding sections establish the core tension: millions of households are eligible for FLPP, but the program serves 350,000 per year, and the screening criteria that determine who gets access vary across institutions and are not visible at the system level. This study addresses three research questions.

RQ1: Which household segments are potentially bankable and where are they geographically?

We map the bankable population by income zone, urban-rural status, employment type, and district. The mapping identifies where the pipeline is concentrated and which household characteristics are most associated with exclusion under each screening lens.

RQ2: What bankability constraints limit mortgage expansion for low-income households?

We construct a four-dimension bankability index from household survey data, then compare how different screening perspectives, regulatory, analytical, and bank-level, produce different eligible populations. The diagnosis identifies which dimensions of bankability drive the gap between regulatory design and bank practice.

RQ3: What policy instruments could improve bank screening alignment and expand access?

We benchmark against international practice, then evaluate concrete alternatives using a six-criteria scoring matrix. The alternatives target specific root causes identified in the diagnosis, not generic incentives to lend more.

1.5 Data and Measurement

This study uses microdata from SUSENAS 2025 (Survei Sosial Ekonomi Nasional, the National Socioeconomic Survey), conducted by Badan Pusat Statistik (BPS, Indonesia's national statistical agency) in the March wave. SUSENAS is the country's largest annual household survey and the standard source for expenditure-based welfare measurement, poverty estimation, and social policy analysis.

We use three tables from the survey. KP (Konsumsi dan Pengeluaran, Consumption and Expenditure) Blok 41 and 42 record commodity-level food and non-food consumption quantities and values. Blok 43 aggregates these into total food expenditure, total non-food expenditure, and a combined total (EXPEND). KOR Ruta (Keterangan Pokok Rumah Tangga, Core Characteristics-Households) captures household-level characteristics including housing conditions, asset ownership, credit access, and financial behavior. KOR Individu (Core Characteristics-Individual) records individual-level demographics, education, and employment status. We merge the three

tables on a composite key of URUT (household sequence number), R101 (province), and R102 (district within province), equivalent to the standard BPS four-digit kabupaten/kota code, then filter to household heads (variable R403==1) to produce a working dataset of 343,460 observations representing 74.1 million Indonesian households. Dim 1 (Income Adequacy) is derived from the KP consumption module. Dims 2 through 4 are derived from the KOR characteristics module.

We use total household expenditure (EXPEND) as a proxy for income because consumption reflects long-term earning capacity more reliably than current income, which fluctuates with seasonal work and transitory shocks (Friedman, 1957).

Two consequences follow from this choice. First, what this study calls the “affordability ratio” (monthly mortgage installment divided by EXPEND) is technically an installment-to-expenditure ratio, not a debt-to-income ratio. Second, the FLPP income ceilings set by PermenPKP 5/2025 are operationalized in our analysis as expenditure ceilings, an unavoidable proxy given the data design. The expenditure proxy likely understates affordability for households that save (where EXPEND is less than income), and overstates it for households that dissave. The target population, low-income renters without homeownership, tends toward low saving rates, so the bias is modest and directionally conservative.

This choice has a further critical implication. Bankability estimates throughout this study are upper bounds. They measure whether a household could afford and sustain a mortgage based on its observed expenditure level, but they do not measure whether that household can prove its income to a bank. In practice, many FLPP-eligible households, particularly those in informal employment, earn enough to service a mortgage but lack the documentation banks require to verify that income. **The gap between economic capacity and verifiable income is real, and the bankability numbers in this study assume that gap is solved.** This connects directly to the study’s policy analysis: Alternative B in Chapter 5 proposes digital income verification infrastructure precisely because the current system cannot bridge this gap.

All population estimates use SUSENAS survey weights (WERT) to project from the sample to national totals. The 5.770 million eligible household figure, the bankability tier distributions, and all geographic breakdowns reported in Chapters 2 through 5 are weighted estimates.

Section 1.5 introduces the data source. Chapter 2.2 explains how each dimension of bankability is scored from SUSENAS variables. No variable-level scoring detail is presented here.

1.6 Methodology Overview

The analysis follows a five-phase design, moving from eligibility definition through household-level scoring, institutional diagnosis, international benchmarking, and scenario analysis.

Phase 1: Eligibility filtering.

We apply three regulatory instruments to the full SUSENAS sample to identify households that meet all FLPP eligibility criteria. PermenPKP 5/2025 sets zone-specific income ceilings. Kepmen PUPR 689/2023 sets zone-specific house price limits. Peraturan BP Tapera 9/2021 requires non-homeownership and no prior housing subsidy. We add a standard affordability floor (monthly installment not exceeding 30% of household expenditure) to define the lower bound of the eligible population. The resulting funnel narrows 74.1 million Indonesian households to **5.770 million program-eligible households**. Chapter 2.1 presents the funnel in full.

Phase 2: Four-dimension bankability index.

We construct a composite index anchored to POJK 42/2017 (Peraturan Otoritas Jasa Keuangan, Financial Services Authority Regulation on Commercial Bank Credit Assessment), which establishes the 5C framework (Character, Capacity, Capital, Collateral, Condition) as the regulatory standard for bank lending decisions. Our four dimensions map to this framework: Dim 1, Income Adequacy (Capacity), measures the affordability ratio between mortgage installment and expenditure. Dim 2, Income Stability (Capacity and Condition), captures employment formality, working hours, and household earner count. Dim 3, Financial Track Record (Character), scores savings behavior, credit access, and financial engagement, with penalties for high-cost borrowing. Dim 4, Risk Buffer (Capital and Collateral), measures asset holdings, tenure security, and food security as a cushion against income shocks. Each dimension is scored 0 to 1 from SUSENAS variables. Chapter 2.2 presents the scoring logic.

Phase 3: Four weighting schemes.

The same households, scored on the same four dimensions, produce different bankability results depending on how the dimensions are weighted. We construct four schemes, each representing a different perspective on what matters most for bankability. The Regulatory scheme weights only Dim 1, reflecting what the law literally tests (reference case). The Creditworthiness scheme distributes weight across all four dimensions with the heaviest on financial track record, reflecting a balanced multi-dimensional assessment (analyst's benchmark). The Mandiri-product scheme concentrates weight on Dim 2 (employment formality) and assigns zero to Dim 4, reverse-engineered from the bank's published product criteria (empirical baseline). The Mandiri-credit-team scheme is derived from expert elicitation with a Bank Mandiri credit officer (robustness check, n=1 caveat disclosed). A fifth equal-weight scheme serves as a methodological baseline but is not carried into the results narrative. All non-trivial schemes derive cardinal weights from ordinal rankings using the Stillwell rank-sum method (Stillwell et al., 1981). District-level aggregation applies a minimum threshold of 30 observations per stratum. Chapter 2.3 presents the four schemes and their weights.

Phase 4: International benchmarking.

We compare four countries, each mapped to a root cause identified in Phase 2. Colombia (credit guarantee design), India (digital income verification), Mexico (dedicated housing finance fund), and

China (cautionary case). For each, we assess the mechanism, institutional prerequisites, and transferability to Indonesia's context. Chapter 4 presents the benchmarking.

Phase 5: Scenario analysis and alternatives.

We recompute the bankability index under alternative parameter vectors to quantify the impact of specific policy instruments. The status quo captures changes already underway. Alternative A (fix existing instruments) addresses guarantee misalignment and tenor extension. Alternative B (build new instruments) addresses digital income verification and fiscal expansion. Alternatives are evaluated using a six-criteria scoring matrix following Bardach and Patashnik (2020). Chapter 5 presents the scenarios and scoring.

Key limitations are flagged in context throughout Chapters 2 through 5 and consolidated in Chapter 6.

1.7 Scope and Boundaries

This study is a population-level bankability mapping of the FLPP-eligible base. It diagnoses how different screening perspectives produce different eligible populations, and it evaluates concrete policy instruments to improve alignment between regulatory design and bank practice. Three boundaries define what this study does not do.

First, this is not a credit scoring model. We do not predict which individual households will default on a mortgage. The bankability index measures whether a household's observable characteristics, income adequacy, employment stability, financial behavior, and asset buffers, meet plausible lending thresholds. It does not generate a score that a bank could use to approve or reject a specific loan application. We also have no access to SLIK (Sistem Layanan Informasi Keuangan, the national credit reporting system) or individual loan performance data. The study diagnoses a selection pattern; it does not prescribe a scoring model.

Second, this is not a program evaluation of FLPP. We do not assess whether FLPP has achieved its intended outcomes, reduced housing costs, or improved welfare for recipients. The study takes the program's design as given and asks a narrower question: among the households that qualify, which ones pass bank screening, and which do not?

Third, this is not a supply-side analysis. We do not examine developer capacity, construction costs, land availability, or the physical condition of housing stock. Indonesia's housing backlog includes 12.57 million families without homeownership and 16.59 million living in housing unfit for habitation (Kementerian PKP, 2026). These figures contextualize why demand-side analysis matters: even if every supply constraint were resolved tomorrow, bank screening would still determine which eligible households gain access to FLPP mortgages. However, the supply-side constraints are real and important, and this study does not address them.

Two scope boundaries deserve explicit statement. Within the FLPP affordability window, 33.2 million households already own their home. These households may need different financial products, home improvement loans, land certification, refinancing, but they satisfy the income and price criteria while failing the non-homeownership requirement and are excluded from our analysis at the first filter. Additionally, this study examines one delivery channel (banking) of one segment (developer-driven) of Program 3 Juta Rumah. Even within the developer-driven segment, multiple instruments exist, including commercial simple housing (PPNDTP), central bank reserve relaxation (GWM), micro housing finance, and developer investment. We focus on FLPP specifically because it is the primary subsidized mortgage instrument where bank credit decisions determine household access. The other three segments, state-built, self-help, and mutual cooperation, operate through channels where bankability is not the binding constraint. Our findings apply to the FLPP banking channel specifically, not to the broader housing program.

Chapter 2

Mapping Bankability at Population Scale

*This chapter assembles the household-level evidence base for the analysis. It identifies who, among Indonesia's 74.1 million households, falls within the FLPP program's mandate, and applies a structured bankability framework to assess their readiness for mortgage lending. The chapter answers Research Question 2: **which household segments are potentially bankable, and where are they geographically?***

2.1 The Eligibility Funnel

We begin by defining the population of interest. FLPP eligibility is governed by two regulatory instruments that together create a region-specific affordability window for each household. PermenPKP No. 5 Tahun 2025 sets the income ceiling, the maximum household expenditure to qualify as *Masyarakat Berpenghasilan Rendah* (MBR), across four geographic zones ranging from Rp 8.5 million (unmarried, Zona 1) to Rp 14 million (married, Jabodetabek). Kepmen PUPR No. 689/KPTS/M/2023 sets the maximum house price across five price zones, from Rp 166 million (Java and Sumatera) to Rp 240 million (Papua), which determines the monthly mortgage installment at FLPP's fixed 5% rate over 20 years with 1% down payment. A household is affordability-eligible when its monthly expenditure (EXPEND) falls between the zone-specific affordability floor, defined as the installment divided by the 30% affordability threshold, and the income ceiling.

Of Indonesia's **74.1 million households** (SUSENAS Maret 2025, described in Section 1.5, weighted), **39.8 million (53.8%) fall within this affordability window**. They earn enough to service the mortgage but not so much that they exceed the MBR ceiling. This is a large population, but it includes households that already own their dwelling, which makes them ineligible under Per. BP Tapera 9/2021 Pasal 13, which requires that the borrower "*belum memiliki rumah.*"

We apply two additional filters from the SUSENAS household roster. First, R1602 (dwelling ownership status): households whose dwelling is self-owned are excluded. Second, R1605 (other property ownership): households where the head, spouse, or child owns another house are also excluded. After applying both filters, the program-eligible base narrows to **5.770 million households**, representing 14.5% of the affordability-eligible population and 7.8% of all Indonesian households. These are non-homeowning households that can afford an FLPP mortgage but do not yet own a home. The 34.0 million affordability-eligible homeowners represent a distinct market segment, one potentially relevant for Bank Mandiri's home improvement and refinancing products, but outside FLPP's mandate and this analysis.

Table 2.1 summarizes the funnel. **The 5.770 million program-eligible households constitute the base population for all bankability scoring that follows.**

Table 2.1. FLPP Eligibility Funnel (SUSENAS Maret 2025, weighted)

Filter	Households	% of Total	Regulatory Basis
Total Indonesian households	74.1M	100.0%	—
Within FLPP affordability window	39.8M	53.8%	PermenPKP 5/2025; Kepmen PUPR 689/2023
Also non-homeowner (program-eligible)	5.770M	7.8%	Per. BP Tapera 9/2021, Pasal 13

Note. Expenditure (EXPEND) is used as the income proxy throughout this analysis, following BPS convention and the permanent income framework (Friedman, 1957). The Tapera regulation's single-person income rule (PermenPKP 5/2025, Pasal 5(6)) means that our household-level filter is stricter than Tapera's actual eligibility criterion, making the 5.770 million figure a conservative lower bound.

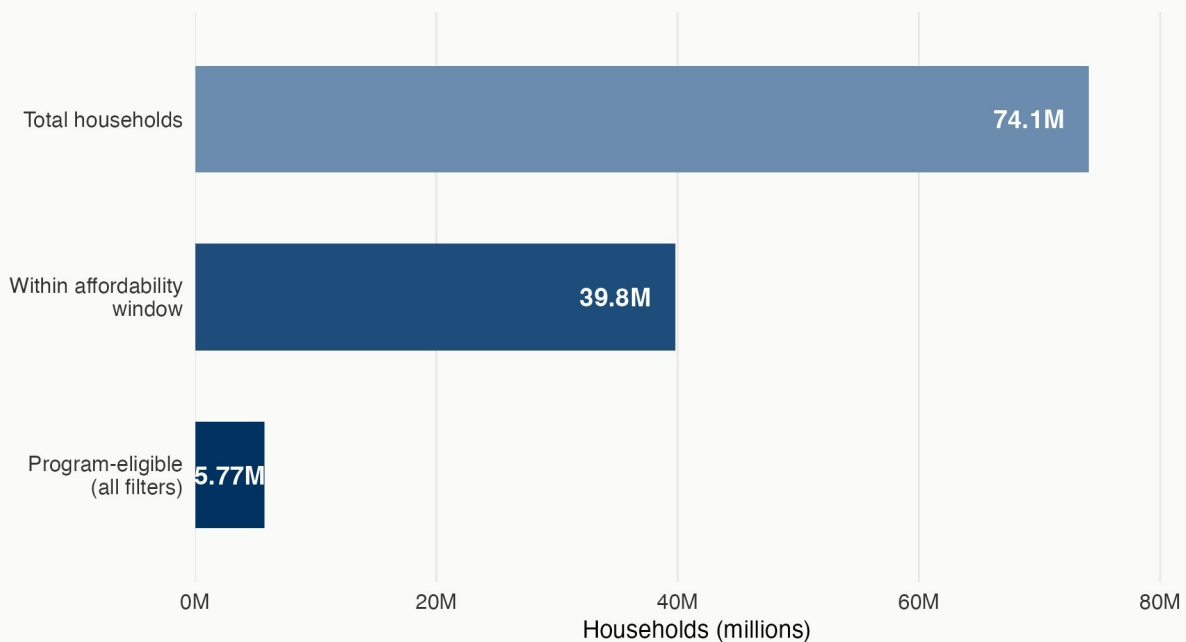


Figure 2.1. Eligibility funnel. Horizontal bar chart showing the three-stage regulatory filter: 74.1 million total households narrow to 39.8 million within the affordability window, then to 5.770 million program-eligible after all three filters are applied.

2.2 The Four Dimensions of Bankability

Having identified who is eligible, we now assess how ready these households are for mortgage lending. We construct a composite bankability index organized around four dimensions, each corresponding to a distinct question a bank must answer before approving a mortgage. The dimensions are grounded in the Five C's of Credit Analysis framework mandated by **POJK 42/POJK.03/2017** for all Indonesian commercial banks, adapted to the variables observable in SUSENAS microdata (Table 2.2). Each dimension passes an independence test: two households identical on three dimensions but different on the fourth would receive a different lending decision.

Table 2.2. Bankability Dimensions and 5C Mapping

Dimension	Bank Question	Maps to 5C	Key Limitation
1. Income Adequacy	Can the household afford the payment?	Capacity	EXPEND ≠ verified income; includes imputations
2. Income Stability	Will the income persist over the mortgage horizon?	Capacity + Condition	Point-in-time snapshot, not trajectory
3. Financial Track Record	Has the household demonstrated financial management?	Character + Capital	No credit bureau data (SLIK/IDEB)
4. Risk Buffer	What cushion exists before default?	Collateral + Capital	Assets binary, not valued; FIES self-reported

Note. 5C framework from POJK 42/POJK.03/2017 (*Kewajiban Penyusunan dan Pelaksanaan Kebijakan Perkreditan Bank bagi Bank Umum*). The Character dimension is the most constrained by data availability: SUSENAS captures financial behavior but not repayment history.

2.2.1 Dimension 1: Income Adequacy

Income adequacy is the foundational test of mortgage viability: can the household make the payment? We measure this as a continuous affordability gradient rather than a binary pass/fail. Each household's score is computed as $1 - (\text{monthly installment} / \text{EXPEND})$, where the monthly installment is determined by the household's price zone. A household at the 30% affordability floor scores 0.70; one at the income ceiling with a low installment-to-expenditure ratio scores as high as 0.91. This formula is the standard mortgage affordability metric used globally by banks and regulators, including OJK.

Across the 5.770 million program-eligible base, **the mean Dimension 1 score is 0.796 and the median is 0.797**, indicating that the typical eligible household would devote roughly 20% of its expenditure to the mortgage, well within conventional affordability standards. 47.9% of households score 0.80 or above, meaning their affordability ratio is below 20%. Because all households in the base are pre-filtered to be within the affordability window, there are no scores below 0.70. The tight distribution, with scores ranging only from 0.70 to 0.91, reflects the narrow income band that defines FLPP eligibility: these households are neither too poor to afford the mortgage nor too wealthy to qualify as MBR.

2.2.2 Dimension 2: Income Stability

A mortgage is a 20-year commitment, so affordability today is necessary but not sufficient. Dimension 2 asks whether the household's income is likely to persist over the loan horizon. We construct this score from three equally weighted sub-indicators drawn from the household head's profile: employment status (R706), hours worked per week (R707), and the number of working household members (n_working_art).

Employment status (R706) is the primary driver, scored on a six-point scale from salaried employee (1.0) through self-employed (0.6) to casual worker (0.2) and unpaid family worker (0.0). Hours worked provides a complementary signal: full-time (35+ hours) scores 1.0, while part-time brackets receive progressively lower scores. The number of working household members captures income diversification, a resilience factor that formal employment screening overlooks entirely.

The population mean is **0.745 with a median of 0.833**, and 54.0% of households score 0.80 or above. The gap between mean and median reflects a left tail of households with informal or irregular employment. This dimension is where **Bank Mandiri's current screening concentrates most heavily**, as we will see in Section 2.3, with the Mandiri-product scheme assigning a weight of 0.50 to stability-related criteria.

2.2.3 Dimension 3: Financial Track Record

Track record captures demonstrated financial behavior, the closest available proxy for what banks assess through SLIK credit bureau checks. Without access to actual repayment history, we construct this dimension from six positive indicators and three penalty indicators available in SUSENAS.

The positive components are: savings account ownership (weighted 0.45 within the dimension), formal credit access (0.20), semi-formal credit (0.10), financial services usage (0.10), e-money adoption (0.10), and leasing (0.05). Three penalty factors reduce the score: use of informal moneylenders (rentenir, -0.20), online lending (pinjol, -0.10), and pawnshop usage (-0.05). The penalties are calibrated to reflect the risk signals these behaviors carry: **a household relying on a rentenir signals either exclusion from formal credit or distress borrowing**, both relevant to a lender's assessment of creditworthiness.

This dimension reveals the **most significant variation in the program-eligible population**. The mean score is just 0.459, with a median of 0.550. Only 3.9% of households score 0.80 or above. These numbers reflect Indonesia's financial inclusion landscape: many MBR households transact primarily in cash, lack formal savings accounts, and have no documented credit history. Dimension 3 is where a creditworthiness-oriented assessment places the greatest weight, as it most directly reflects the borrower's demonstrated capacity to manage financial obligations (Section 2.3).

2.2.4 Dimension 4: Risk Buffer

The final dimension asks what happens if income drops temporarily: does the household have a cushion before default? In conventional mortgage lending, the property itself serves as primary collateral. Dimension 4 captures the household’s supplementary resilience, its ability to weather a shock without immediately defaulting.

We aggregate seven positive sub-indicators: land with certificate (weighted 0.30 within the dimension), cash savings or gold equivalent to 10 grams or more (0.20), gold ownership (0.10), motorcycle (0.10), durable goods (0.10), social security coverage (0.10), and housing tenure security (0.10). A food insecurity penalty (FIES, -0.15) reduces the score for households reporting food insecurity experiences, as these signal that the household is already operating without margin. Notably, land ownership does not disqualify a household from FLPP, which finances the purchase of completed units from registered developers rather than self-construction. Land with certificate is therefore scored as a positive risk buffer, not an eligibility conflict.

Dimension 4 is, by a wide margin, **the weakest dimension across the program-eligible population**. The mean score is 0.218 with a median of just 0.183, and effectively 0.0% of households score 0.80 or above. This is not a measurement failure but a structural reality of the MBR segment: these households have low asset bases, limited formal savings, and thin margins against income shocks. Any weighting scheme that loads heavily on risk buffers will classify most of the program-eligible population as unbankable.

Table 2.3. Dimension Score Distribution, Program-Eligible Base (N = 5.770M)

Dimension	Mean	Median	Pass ≥0.80	Pass ≥0.50
1. Income Adequacy (affordability gradient)	0.796	0.797	47.9%	100.0%
2. Income Stability	0.745	0.833	54.0%	—
3. Financial Track Record	0.459	0.550	3.9%	—
4. Risk Buffer	0.218	0.183	0.0%	—

Note. All scores raw 0–1 scale without normalization. Dim 1 range for program-eligible base is 0.70–0.91 (all households pre-filtered to affordability window). Source: Authors’ calculations from SUSENAS Maret 2025.

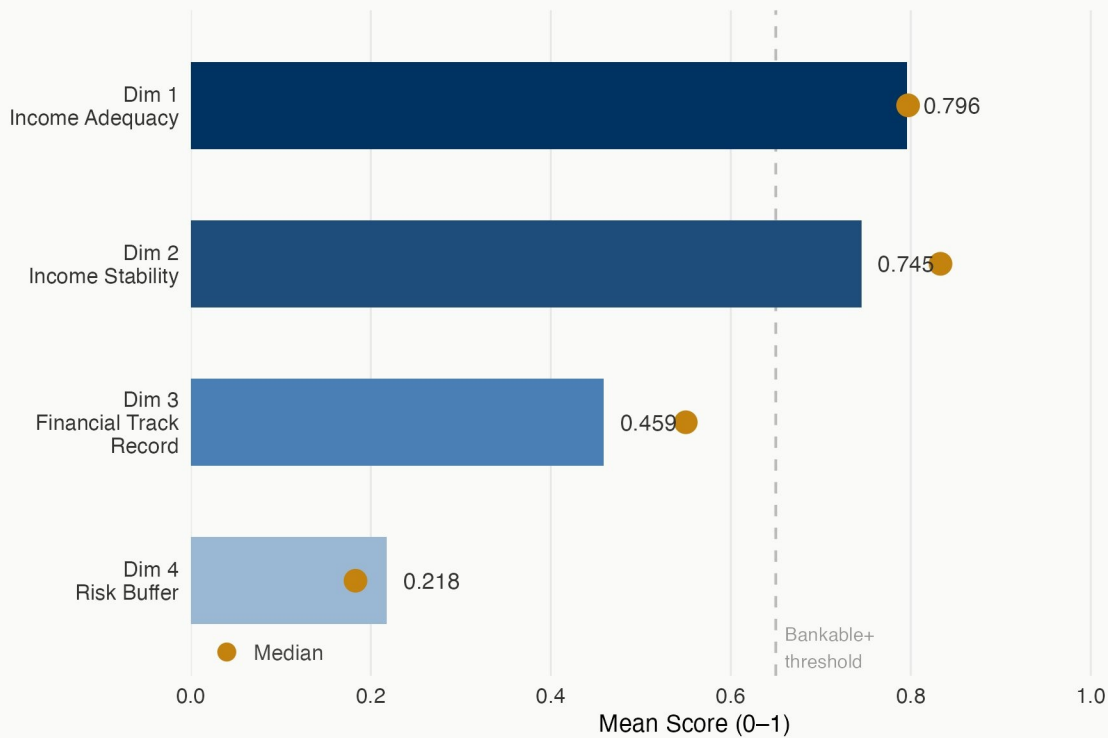


Figure 2.2. Dimension score profile. Horizontal bars show mean scores (0–1) for each of the four creditworthiness dimensions across program-eligible households. Gold dots indicate median values. The dashed line marks the Bankable+ threshold (≥ 0.65). Dim 4 (Risk Buffer) is the weakest dimension at 0.218.

Table 2.3 reveals a clear pattern. **The program-eligible population is strong on affordability and reasonably stable in income, but thin on documented financial behavior and very thin on asset-based resilience.** These gradient matters because different weighting schemes, which reflect different definitions of what makes a household bankable, will reach sharply different conclusions about the same population. A scheme that emphasizes income adequacy will find a large bankable pipeline. One that emphasizes financial track record will find a smaller but arguably more creditworthy pool. And one that loads on risk buffers will classify almost everyone as unbankable. We turn to these competing definitions next.

2.3 Defining Bankability: Four Perspectives

The four dimensions described above are building blocks. **What makes a household “bankable” depends on how much weight each dimension receives**, and that weighting reflects a prior judgment about what matters most in mortgage lending. Rather than imposing a single definition, we construct five weighting schemes, each representing a distinct perspective on what bankability means. This “competing definitions” approach, adapted from Desriani (2025), allows us to examine how the same population looks through different institutional lenses.

All five schemes share a common methodological backbone. For schemes that require converting an ordinal ranking of dimensions into cardinal weights, we apply the Stillwell rank-sum method

(Stillwell et al., 1981), which assigns weights proportional to the reciprocal of each dimension's rank position. This method is recommended by the OECD/JRC Handbook on Constructing Composite Indicators (2008) for precisely this purpose: translating qualitative priority orderings into defensible numeric weights without requiring interval-scale judgments from the ranker. **The conversion method is identical across all schemes**; what differs is the ranking itself and the epistemic basis behind it.

Table 2.4. Five Weighting Schemes for the Bankability Index (Post-Stillwell Rank-Sum)

Scheme	Dim 1 Adequacy	Dim 2 Stability	Dim 3 Track Record	Dim 4 Buffer	Ranker
Regulatory	1.00	0.00	0.00	0.00	Legal text
Equal	0.25	0.25	0.25	0.25	Baseline
Creditworthiness	0.30	0.20	0.40	0.10	Analyst (literature)
Mandiri-product	0.17	0.50	0.33	0.00	Analyst (reverse- eng.)
Mandiri-credit- team	0.40	0.20	0.30	0.10	Credit expert (Mandiri)

Note. All non-trivial schemes derived via Stillwell rank-sum (Stillwell et al., 1981; OECD/JRC, 2008). Regulatory and Equal do not require ranking. Creditworthiness ranking: Dim 3 > Dim 1 > Dim 2 > Dim 4. Mandiri-product ranking: Dim 2 > Dim 3 > Dim 1 (Dim 4 excluded). Mandiri-credit-team ranking: Dim 1 > Dim 3 > Dim 2 > Dim 4. Boldface marks highest-weighted dimension per scheme. The Equal-weight scheme (0.25/0.25/0.25/0.25) serves as a methodological baseline and is not carried into the results narrative. The analytical comparison focuses on Regulatory (reference case), Creditworthiness, Mandiri-product, and Mandiri-credit-team.

The Regulatory scheme reflects the eligibility criteria established by Per. BP Tapera 9/2021. The regulation's only binding gate is income-based: it sets an expenditure ceiling and, implicitly, an affordability floor. It imposes no tenure requirement, no employment-type restriction, no credit history check, and no asset threshold. Pasal 13(5) explicitly accommodates informal workers through daily or weekly installment arrangements, and Pasal 26(2)(h) accepts lurah attestation in place of formal income documentation. The regulation deliberately delegates all other credit risk assessment to the bank's internal policy and OJK prudential regulation. Weighting Dim 1 at 1.00 and all other dimensions at zero captures this design: **the regulation tests affordability and nothing else.**

The Creditworthiness scheme represents an independent, literature-grounded assessment of what matters for mortgage repayment. It ranks financial track record first (Dim 3), income adequacy second (Dim 1), income stability third (Dim 2), and risk buffers last (Dim 4). The Stillwell rank-sum conversion yields weights of 0.30 / 0.20 / 0.40 / 0.10. This scheme serves as the **analytical anchor**: it answers the question "what does rigorous, multi-dimensional creditworthiness assessment look like when applied at population scale?"

The Mandiri-product scheme is reverse-engineered from Bank Mandiri’s published KPR FLPP requirements. The bank’s product page specifies “formal workers with fixed income” and imposes tenure requirements of three months for permanent employees or 24 months for contract workers, an 8× tenure differential that loads heavily on employment formality. We translate this into a ranking of Dim 2 > Dim 3 > Dim 1, with Dim 4 excluded entirely, consistent with standard KPR practice where the property carries the collateral function. Applying the Stillwell rank-sum conversion across the remaining three dimensions produces weights of 0.17 / 0.50 / 0.33 / 0.00. The resulting weights (0.17 / 0.50 / 0.33 / 0.00) capture how Mandiri’s screening **concentrates on income stability and formality** while placing substantially less weight on actual affordability.

The Mandiri-credit-team scheme is derived from a structured questionnaire administered to a credit expert in Bank Mandiri’s Mortgage and Auto Loan Group (April 2026). The expert ranked the four dimensions in order of importance for FLPP lending decisions: income adequacy first, financial track record second, income stability third, and risk buffer fourth. The Stillwell rank-sum conversion produces weights of 0.40 / 0.20 / 0.30 / 0.10. This scheme answers a pointed question: **does the professional judgment of the bank’s own credit team align with the bank’s published screening criteria?** The answer, as Section 2.4 will show, is that they diverge substantially.

A fifth equal-weight scheme (0.25 across all four dimensions) is included in Table 2.4 as a methodological baseline but is not carried into the results narrative, as it produces an artificially low Bankable+ rate (16.9%) driven by Dimension 4’s structural floor.

Note. The expert ranking reflects n = 1 professional judgment, disclosed as a limitation. The individual is identified in the table note for APA sourcing but referred to generically as “credit expert” in prose.



Figure 2.3. Scheme weights heatmap. Color intensity reflects the weight each scheme assigns to each dimension. Mandiri-product concentrates 0.50 on Income Stability and assigns 0.00 to Risk Buffer; Creditworthiness distributes weight more evenly with the heaviest loading (0.40) on Financial Track Record.

2.4 Tier Distribution: Who Qualifies Under Which Lens

We classify every program-eligible household into five tiers based on its composite bankability score. The cutoffs are fixed across all schemes to enable direct comparison: **High-Confidence Bankable (≥ 0.70)** identifies households approvable under current conditions with no special support; Bankable (0.65–0.699) captures solid fundamentals within normal FLPP parameters; Near-Bankable (0.50–0.649) marks households one targeted intervention away from qualifying; Emerging (0.35–0.499) indicates multiple gaps requiring sustained support; and Low-Bankability (< 0.35) suggests that other housing instruments may be more appropriate.

Table 2.5 applies the four analytical schemes to the same 5.770 million households. The results are dramatic.

Table 2.5. Four-Scheme Tier Distribution (Base = 5.770M Program-Eligible Households)

Tier	Regulatory	Creditworthiness	Mandiri-product	Mandiri-credit-team
High-Confidence Bankable (≥ 0.70)	5.770M (100.0%)	1.190M (20.6%)	2.978M (51.6%)	1.698M (29.4%)
Bankable (0.65–0.699)	0.000M (0.0%)	1.461M (25.3%)	0.511M (8.9%)	1.419M (24.6%)
Near-Bankable (0.50–0.649)	0.000M (0.0%)	1.480M (25.6%)	1.331M (23.1%)	1.657M (28.7%)
Emerging (0.35–0.499)	0.000M (0.0%)	1.393M (24.1%)	0.659M (11.4%)	0.958M (16.6%)
Low-Bankability (< 0.35)	0.000M (0.0%)	0.245M (4.3%)	0.292M (5.1%)	0.039M (0.7%)
Bankable+ (≥ 0.65)	5.770M (100.0%)	2.652M (46.0%)	3.489M (60.5%)	3.116M (54.0%)

Note. Bankable+ combines High-Confidence Bankable and Bankable tiers (≥ 0.65). Percentages of total program-eligible base (5.770M). Source: Authors' calculations from SUSENAS Maret 2025.

Three findings emerge from this table. First, **the Regulatory scheme classifies 100% of the program-eligible base as High-Confidence Bankable**. This is by construction: the regulation tests only income adequacy, and every household in the base already passed the affordability filter. Whatever constrains FLPP disbursement is not the regulation itself but the screening that banks apply downstream.

Second, the three analytical schemes produce starkly different Bankable+ populations, from 2.652 million under Creditworthiness to 3.489 million under Mandiri-product, with Regulatory at 100.0%. **Bankable+ rates range from 46.0% (Creditworthiness) to 60.5% (Mandiri-product) across the three analytical schemes, with Regulatory at 100.0%**. This is not a defect of the analysis but rather

its point: the definition drives the conclusion, and making that transparent is what allows decision-makers to choose the standard that matches their risk appetite.

Third, and perhaps most consequentially, **the Mandiri-product scheme passes more households at Bankable+ (3.489M, 60.5%) than the Creditworthiness scheme (2.652M, 46.0%)**. The bank’s current screening is not, in aggregate, more restrictive than a rigorous multi-dimensional assessment. It is, however, screening on different things. The Mandiri-credit-team scheme, reflecting professional credit judgment, falls between the two at 3.116M (54.0%), closer to Creditworthiness than to the bank’s own product criteria. What drives these differences, and what they imply for screening alignment, is the subject of Chapter 3.

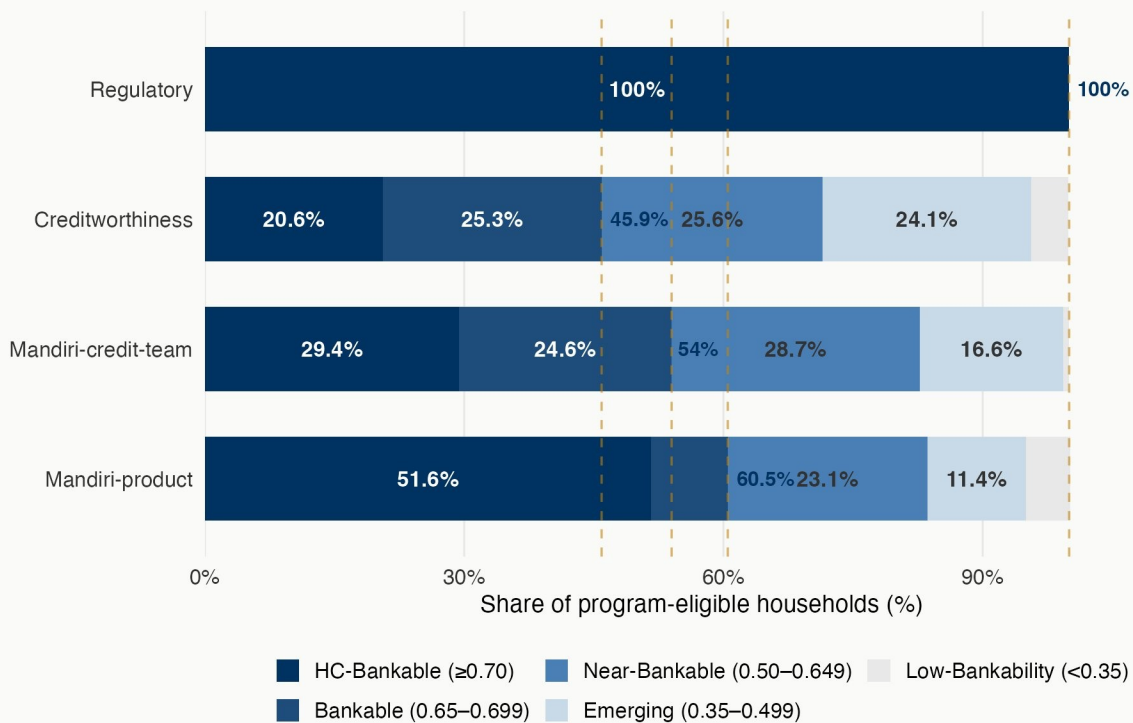


Figure 2.4. Tier distribution by scheme. Stacked horizontal bars show how program-eligible households distribute across five bankability tiers under each weighting scheme. Dashed lines mark the Bankable+ (≥0.65) boundary for each scheme. Regulatory classifies 100% as High-Confidence Bankable; the analytical schemes produce sharply different distributions.

2.5 Pipeline vs. Capacity

FLPP’s annual disbursement capacity is approximately **350,000 mortgages**, a figure constrained by the fiscal allocation from BP Tapera and the number of participating banks and developers. Table 2.6 compares this capacity against the bankable pipeline at several levels of conservatism.

Table 2.6. Pipeline vs. Annual FLPP Capacity (350K Mortgages)

Measure	Households	Multiple of Capacity	Interpretation
Creditworthiness High-Confidence Bankable (≥ 0.70)	1.190M	3.4×	Most conservative
Creditworthiness Bankable+ (≥ 0.65)	2.652M	7.6×	Independent benchmark
Mandiri-credit-team Bankable+ (≥ 0.65)	3.116M	8.9×	Expert-validated
Mandiri-product Bankable+ (≥ 0.65)	3.489M	10.0×	Current screening lens
Total program-eligible	5.770M	16.5×	Full regulatory mandate

Note. Bankable+ combines High-Confidence Bankable and Bankable tiers (≥ 0.65). Annual FLPP capacity based on recent disbursement volumes (~350K units/year). Scheme names expanded in row labels.

The central finding is unambiguous. **Even at the most conservative multi-dimensional threshold, the Creditworthiness High-Confidence Bankable cutoff (≥ 0.70), the eligible pipeline exceeds annual FLPP capacity by a factor of 3.4.** At the expert-validated level, the multiple rises to 8.9. Under the bank's own screening lens, it reaches 10.0. The problem facing FLPP is not a shortage of bankable borrowers. It is that disbursement capacity falls far short of demand at every plausible definition of bankability.

This framing is deliberate. The analysis does not prescribe which number Mandiri or BP Tapera should use. A decision-maker who prefers the most conservative estimate can point to 1.190 million. One seeking to maximize the program's reach can point to the full 5.770 million regulatory mandate. **The data supports every level; the choice belongs to the institution.** What the data does not support is the conclusion that the pipeline is empty or that banks must lower their standards to expand lending. The pipeline is large, verifiably bankable by multiple definitions, and far exceeds supply.

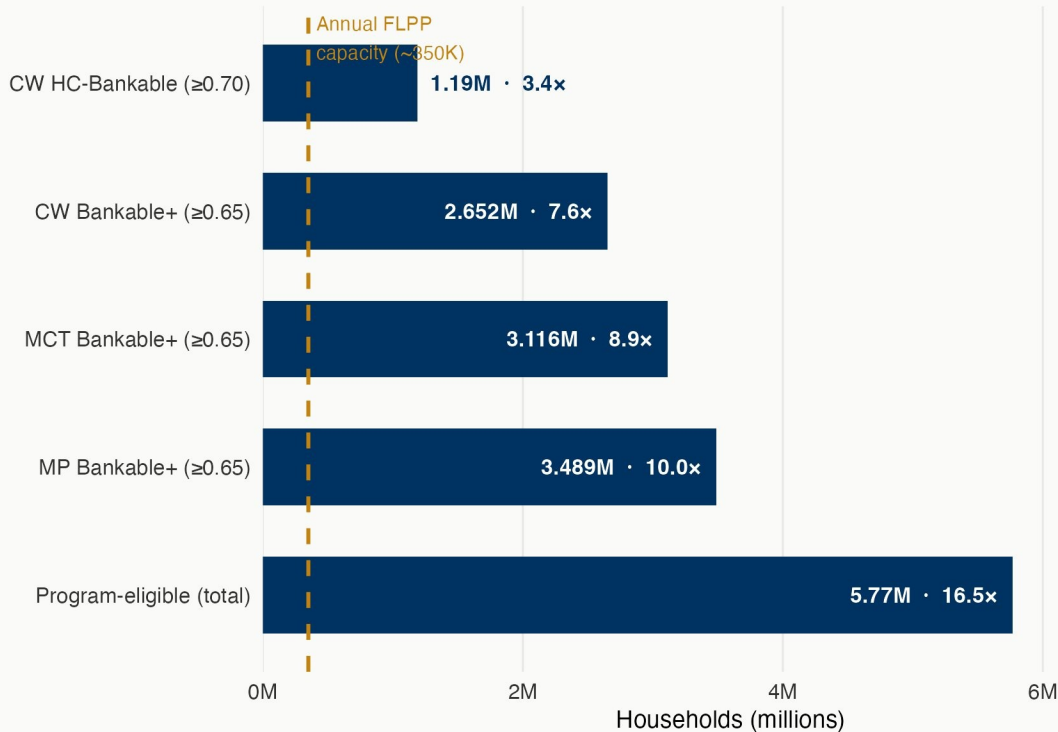


Figure 2.5. Pipeline multiples. Horizontal bars show the size of each pipeline definition against the dashed gold line marking annual FLPP capacity (~350K units). Even the most conservative pipeline (CW HC-Bankable, 1.19M) exceeds capacity by 3.4 times.

2.6 Geographic Distribution

Bankability is not uniformly distributed across Indonesia. Two structural features of the FLPP program create geographic variation before any household characteristic comes into play. First, the income ceiling zones (PermenPKP 5/2025) range from Rp 8.5–10 million in Zona 1 (Java and Sumatera) to Rp 12–14 million in Zona 4 (Jabodetabek), determining who qualifies as MBR. Second, the house price zones (Kepmen PUPR 689/2023) set installments from Rp 1.08 million (Zone 1) to Rp 1.57 million (Zone 5, Papua), determining the affordability floor. **The two zone systems do not align geographically:** Bali, NTT, and NTB fall under the lowest income ceiling (Zona 1) but the second-highest house price (Zone 4, Rp 185 million, shared with Jabodetabek). This mismatch compresses the affordability window for households in those provinces, reducing both the size of the eligible population and the affordability headroom of those who do qualify.

The most consistent geographic pattern in the data is the urban-rural gap. Under the Mandiri-product scheme, 62.2% of urban program-eligible households reach Bankable+ (≥0.65), compared to 51.7% in rural areas, a gap of 10.5 percentage points. Under the Regulatory scheme, both groups pass at 100%, confirming that the gap is not driven by income eligibility but by the dimensions that matter downstream: employment formality, financial track record, and asset buffers, all of which skew urban. The rural penalty is widest in Dimension 2 (income stability), where salaried

employment is less prevalent, and in Dimension 3 (financial track record), where formal banking infrastructure is thinner.

Table 2.7. Urban-Rural Bankable+ Rates by Scheme (≥ 0.65)

Setting	Regulatory	Mandiri-product (Mp)	Gap (Reg vs Mp)	Creditworthiness
Urban	100.0%	62.2%	37.8 pp	47.8%
Rural	100.0%	51.7%	48.3 pp	36.7%

Note. Bankable+ combines High-Confidence Bankable and Bankable tiers (≥ 0.65). Urban/rural classification from SUSENAS R105. Gap = Regulatory Bankable+ rate minus Mandiri-product Bankable+ rate. The wider rural gap indicates that bank-level screening criteria have a disproportionate effect on rural households. Creditworthiness urban-rural breakdown to be added from Tableau output.

In absolute terms, Java's population weight means the island accounts for the largest share of program-eligible households. However, **bankability rates vary substantially across islands and provinces**, driven by differences in labor market formality, banking penetration, and asset accumulation patterns. Provinces with large informal economies, such as those in eastern Indonesia, tend to have lower Dimension 2 and Dimension 3 scores, which penalizes them disproportionately under schemes that weight these dimensions heavily. Conversely, provinces with higher banking penetration and formal employment shares, such as DKI Jakarta and Bali, produce higher composite scores under the Creditworthiness and Mandiri-product schemes alike.

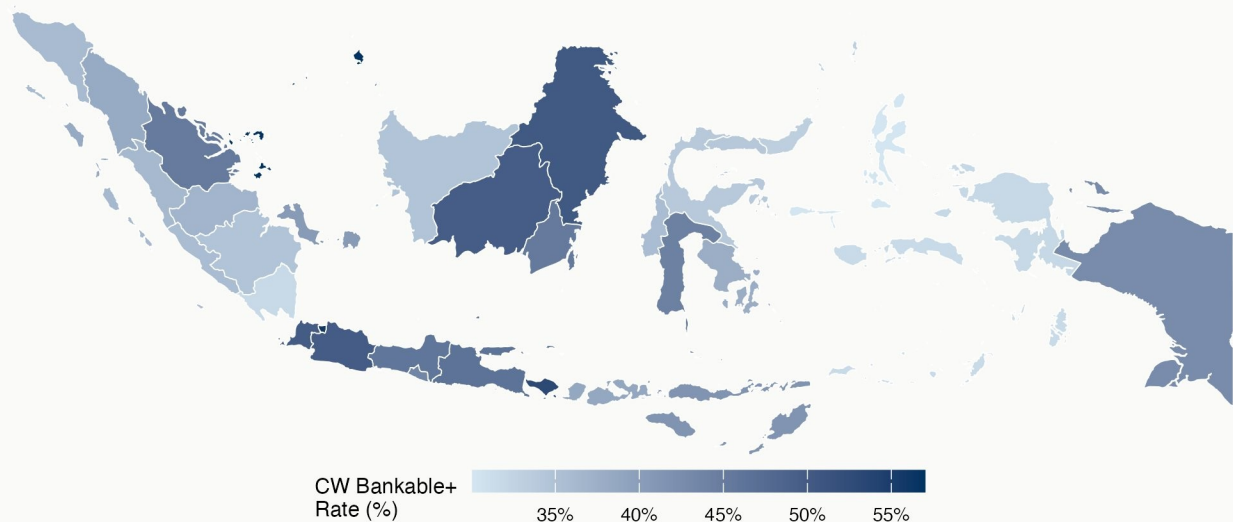


Figure 2.6 Creditworthiness Bankable+ rate by province. Darker shading indicates a higher share of program-eligible households scoring as creditworthy (≥ 0.65) under the independent Creditworthiness scheme. Kalimantan and parts of western Sumatra show the highest rates.

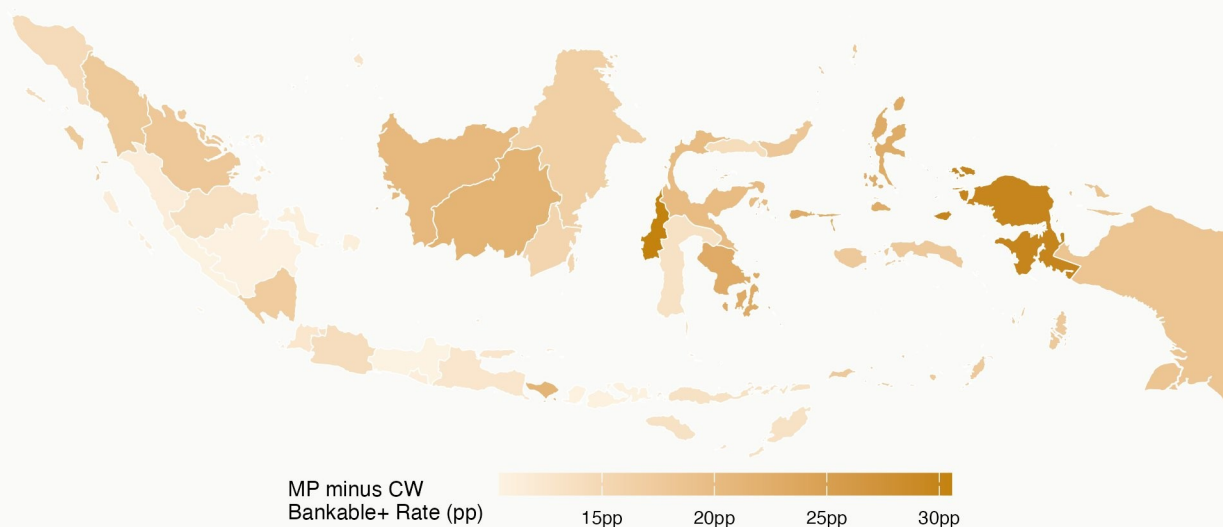


Figure 2.7. Screening gap by province (Mandiri-product minus Creditworthiness Bankable+ rate). Gold intensity indicates the size of the gap in percentage points. The widest gaps appear in Sulawesi, Papua, and Kalimantan, where employment informality is highest and the formality-weighted Mandiri-product scheme diverges most from the Creditworthiness assessment.

The geographic dimension reinforces a pattern visible throughout this chapter. The regulation admits everyone who can afford the mortgage, regardless of where they live or how they earn their income. Bank-level screening then filters selectively, and that selection falls hardest on rural households and provinces with large informal labor markets. **The gap between regulatory eligibility and bank-level qualification is not uniform across Indonesia; it is widest precisely where the need for subsidized housing is greatest.**

This chapter has established three facts. First, the program-eligible pipeline is large: 5.770 million non-homeowning households fall within the FLPP affordability window. Second, how many of them count as “bankable” depends entirely on which dimensions the screening emphasizes, a choice that ranges from 100% under the regulation to 46.0% under a rigorous, independent creditworthiness assessment. Third, even the most conservative estimate produces a pipeline that exceeds annual FLPP capacity by a factor of 3.4. **The regulation is not the binding constraint.** Whatever limits FLPP disbursement operates downstream, in the screening criteria that banks apply beyond what the regulation requires. Chapter 3 examines what those criteria are, how they compare with both the regulatory framework and the bank’s own credit judgment, and what drives the gap.

Chapter 3

Institutional Diagnosis: Bank Screening in a Constrained Environment

Small-house mortgage lending is the highest-risk segment in Indonesian banking. **KPR for buildings ≤ 21 m², the category most comparable to FLPP housing, recorded non-performing loans of 5.23% in April 2025** (Bank Mandiri, Office of Chief Economist, 2025, citing BI data), nearly double the system-wide KPR average of 3.01% and rising from 3.65% a year earlier. Yet **FLPP's subsidy design, a fixed 5% interest rate and 20-year tenor, functions as a built-in credit enhancement** that conventional small-house lending lacks. This raises a question that Chapter 2's household mapping cannot answer on its own: if the program structure mitigates the segment's inherent risk, what institutional mechanisms explain the gap between the regulation's inclusive design and the bank's narrower screening practice?

This chapter examines that question through three analytical moves. Section 3.1 compares the regulatory framework with Bank Mandiri's published product criteria and a credit expert's stated priorities, revealing where the bank adds screening requirements the regulation did not intend. Sections 3.2 through 3.5 decompose the four-scheme bankability results to quantify the population-level consequences of these differences. Section 3.6 synthesizes three root causes that together explain why FLPP disbursement remains constrained despite a deep pool of creditworthy borrowers.

3.1 The Regulatory Intent Versus Bank Practice

Per. BP Tapera No. 9/2021 establishes the eligibility architecture for FLPP subsidized mortgages. **The regulation's design is deliberately inclusive**: it tests whether a household falls within the affordability window, defined by zone-specific income ceilings (PermenPKP No. 5/2025) and a minimum capacity to service the monthly installment, but imposes almost no requirements on employment formality, credit history, or asset holdings. As Chapter 2 demonstrated, 100% of the 5.770 million program-eligible households score at or above the High-Confidence Bankable threshold under the Regulatory scheme, confirming that the regulation itself is not the binding constraint on FLPP lending.

Bank Mandiri's published FLPP product criteria introduce additional screening layers that the regulation does not require. To make these differences visible, Table 3.1 places the regulatory text, the bank's product page, and input from a credit expert in the bank's Mortgage & Auto Loan Group side by side across six key screening criteria.

Table 3.8. Comparison of FLPP Screening Criteria Across Three Sources

Criterion	Regulation	Mandiri Product Page	Credit Expert
Employment type	All workers including informal. Pasal 13(5) provides for daily, weekly, or other installment schedules.	“Formal workers with fixed income” (product page).	Would approve casual laborer who can afford installment (Q3 response).
Tenure requirement	None specified in regulation.	Permanent employee: 3 months minimum. Contract employee: 24 months minimum.	Responded with income threshold (IDR 2,500,000), not a tenure figure (Q4).
Income verification	Lurah attestation accepted as income documentation (Pasal 26(2)(h)).	Formal payslip documentation required.	“Currently we only accept formal workers with fixed income” (Q4 verbatim).
Pinjol/paylater credit history	Not addressed. POJK 11/2024 requires all licensed P2P lenders to report to SLIK from July 2025.	Visible via SLIK check. BP Tapera initially reported 111,258 unprocessed FLPP applications attributed to small fintech debts, but OJK verification found only 3,299 explicitly SLIK-rejected (Pusparisa & Nugraha, 2025).	Flagged SLIK credit history as important input (Q5). Confirmed bank checks SLIK for all applicants.
E-wallet income verification	Not addressed in regulation.	Not offered as alternative income documentation.	“No” (Q4). Infrastructure to ingest e-wallet transaction data does not exist for KPR assessment.
Risk buffer assessment	Delegated to bank internal policy and OJK prudential regulation (POJK 42/2017).	Functionally zero weight. Dim 4 = 0.00 in reverse-engineered scheme.	Ranked 4th of 4 dimensions (Q1). Weight = 0.10 via rank-sum.

Note. Regulatory requirements from Per. BP Tapera No. 9/2021, PermenPKP No. 5/2025, and POJK 11/2024. Bank Mandiri product criteria from bankmandiri.co.id/en/kredit-pemilikan-rumah-bersubsidi (accessed April 2026). SLIK applicant data cited by Menteri PKP (pkp.go.id, April 2026). Credit expert input from a structured questionnaire completed by an officer, Mortgage & Auto Loan Group, Bank Mandiri, April 22, 2026 (n = 1). Expert responses are reported as stated; interpretive framing is identified explicitly in the text.

Four patterns emerge from this comparison.

First, **the regulation accommodates informal workers, but the bank’s product criteria do not.** Pasal 13(5) of Per. BP Tapera 9/2021 explicitly provides for installment payments on daily, weekly, or other non-monthly schedules, a provision designed to include workers with irregular income streams. Pasal 26(2)(h) allows a lurah attestation as income documentation, offering a verification pathway for households that cannot produce formal payslips. Bank Mandiri’s product page, by contrast, requires applicants to be “formal workers with fixed income.” The bank’s tenure rule, requiring a minimum of three months for permanent employees or twenty-four months for contract employees, further narrows the eligible population. No such tenure requirement appears in the

regulation. When asked about minimum tenure, the credit expert responded with an income threshold rather than a duration, which we interpret as reflecting a professional emphasis on repayment capacity over employment tenure.

Second, **the credit expert's professional judgment differs from the bank's published criteria on informal borrowers.** Presented with the scenario of a casual laborer who can comfortably afford the monthly installment, the expert indicated approval. This contrasts with the bank's stated policy, which excludes all non-formal workers regardless of their demonstrated financial capacity. The expert also indicated approval for a self-employed applicant with savings and land ownership but only primary-level education, confirming that formal education does not function as a gatekeeping criterion in professional credit judgment. These responses suggest **room for closer alignment between institutional screening criteria and the priorities that a lending professional applies in practice.**

Third, **existing digital credit data in SLIK creates an unintended barrier to FLPP access, but the barrier is narrower and the underlying problem broader than initially reported.** Under POJK 11/2024, all licensed fintech lending platforms are now required to report borrower data to OJK's Sistem Layanan Informasi Keuangan (SLIK). When banks run SLIK checks on FLPP applicants, small outstanding fintech debts, often from paylater or online lending products, can trigger negative flags. In August 2025, BP Tapera reported 111,258 FLPP credit applications that had not been processed by banks after more than six months, attributing the backlog to outstanding debts of up to Rp 1 million recorded in SLIK (Pusparisa & Nugraha, 2025). However, subsequent verification by OJK and the Ministry of Finance found this attribution to be a miscalculation. Of the 103,297 applications OJK reviewed, 5,632 had already been disbursed and 36,404 required bank follow-up, while only 3,299 were explicitly rejected due to SLIK status (OJK, 2025). The Minister of Finance concluded that at most 100 applicants were genuinely blocked by micro-debts below Rp 1 million, and that clearing SLIK records would not solve the demand problem (Pusparisa & Nugraha, 2025). The remaining unprocessed applications were attributed to weak demand, bank follow-up delays, incomplete documentation, and non-SLIK eligibility issues. This correction actually reveals a deeper finding: the system lacks the data infrastructure to distinguish among these causes. OJK responded by relaxing the SLIK display threshold for FLPP applications, effective mid-2026 (OJK, 2026). This finding complicates a straightforward reading of Dimension 3 in our framework: online lending usage that our scoring treats as a behavioral signal of financial engagement is, in practice, being used to exclude the very population FLPP was designed to serve, and the system cannot even diagnose how often this actually occurs versus other causes of application failure.

Fourth, **alternative income verification infrastructure remains absent.** When asked whether digital transaction history, such as two or more years of e-wallet records, could substitute for formal documentation, the credit expert responded "No." We interpret this response as reflecting a genuine infrastructure gap: the bank currently lacks the systems to ingest and evaluate e-wallet transactional data, such as GoPay or OVO payment patterns, as part of the KPR credit assessment process. This is a distinct problem from the SLIK online lending issue. Where SLIK captures credit obligations, e-wallet transaction histories could, in principle, verify income stability for informal workers who lack

payslips. The absence of this verification pathway is the constraint that connects directly to the international benchmarking in Chapter 4, particularly India’s Account Aggregator framework.

Together, these comparisons reveal a screening architecture shaped by the constraints of the current verification environment: banks apply criteria the regulation does not require, partly because the infrastructure to verify creditworthiness through other signals does not yet exist. Digital financial infrastructure simultaneously creates new barriers and leaves verification gaps unfilled. The credit expert ranked income adequacy first and employment stability third among the four bankability dimensions (see Section 3.4), producing a priority structure closer to the independent Creditworthiness assessment (Dim 1 = 0.30, Dim 2 = 0.20) than to the bank’s own product screening criteria (Dim 1 \approx 0.17, Dim 2 = 0.50). **Screening currently concentrates on employment formality because that is the dimension the verification environment can support; with better verification infrastructure, it could distribute across several.** The next section quantifies what this concentration means for the 5.770 million households in the eligible pool.

3.2 The Diagnostic: Four Lenses on the Same Population

Table 2.5 showed that the four schemes classify the same 5.770 million program-eligible households into sharply different bankable pools, ranging from 46.0% (Creditworthiness) to 60.5% (Mandiri-product) across the analytical schemes, with Regulatory at 100.0% by construction. **The central finding is not that any single scheme is correct, but that the choice of screening lens determines how many households appear bankable and, as Section 3.3 will show, which households qualify.** This section measures the gaps between schemes to make the institutional diagnosis precise.

Table 3.2 reports the screening gaps, the difference in qualifying volumes and pass rates, between scheme pairs at both the High-Confidence Bankable (≥ 0.70) and Bankable+ (≥ 0.65) cutoffs.

Table 3.9. Screening Gaps Between Scheme Pairs

Comparison	High-Confidence Bankable (≥ 0.70)	High-Confidence Bankable gap	Bankable+ (≥ 0.65)	Bankable+ gap
Regulatory vs Mandiri-product	2.793M	+48.4pp	2.282M	+39.5pp
Mandiri-product vs Creditworthiness	1.788M	+31.0pp	0.837M	+14.5pp
Mandiri-credit-team vs Creditworthiness	0.507M	+8.8pp	0.465M	+8.1pp
Regulatory vs Creditworthiness	4.580M	+79.4pp	3.119M	+54.0pp

Note. Bankable+ combines High-Confidence Bankable and Bankable tiers (≥ 0.65). Gap = row scheme A minus row scheme B, in millions and percentage points. Positive values indicate scheme A qualifies more households. Scheme names expanded in row labels. Source: Authors’ calculations from SUSENAS 2025.

Three readings of this table matter for the institutional diagnosis. First, **the Regulatory scheme places 100% of households at High-Confidence Bankable**, confirming that Per. BP Tapera 9/2021 functions as an affordability gate, not a creditworthiness filter. Whatever constrains FLPP lending lies downstream of the regulation.

Second, **Mandiri-product passes more households than the independent Creditworthiness assessment at both cutoffs**. At Bankable+, the gap is 0.837 million households (+14.5pp). The bank's screening is not too strict in aggregate. It is, as the next section demonstrates, selecting on different characteristics.

Third, **the Mandiri-credit-team scheme falls between the other two but much closer to Creditworthiness**: the MCT–CW gap is only 8.1 percentage points at Bankable+, compared with 14.5 percentage points for MP–CW. This triangulation pattern, where the credit professional's priorities align more closely with independent risk assessment than with the institution's published screening rules, is explored in detail in Section 3.4.

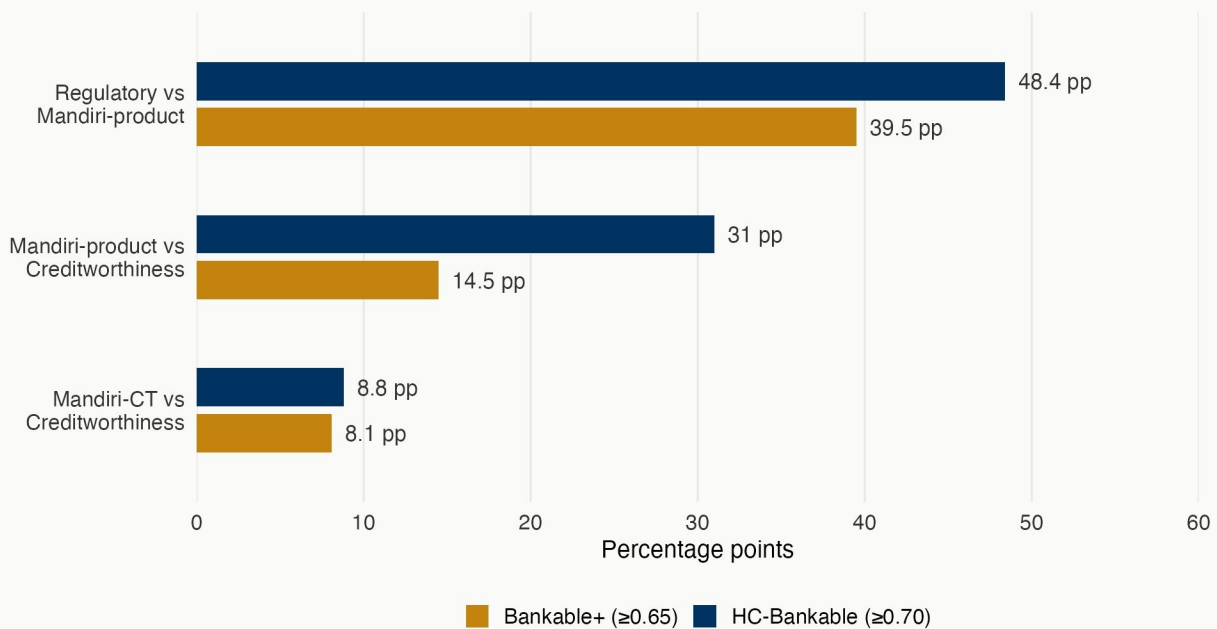


Figure 3.8. Over-screening gaps. Diverging bar chart showing the percentage-point gap between scheme pairs at HC-Bankable (≥ 0.70) and Bankable+ (≥ 0.65) cutoffs. The Regulatory-vs-Mandiri-product gap is the largest (48.4pp at HC-Bankable), indicating the widest divergence between regulatory intent and bank practice.

3.3 What the Numbers Are Made Of: Sub-Component Decomposition

The volume difference between schemes matters less than the composition difference. This section decomposes the Bankable+ population (≥ 0.65) under three schemes, Creditworthiness, Mandiri-product, and Mandiri-credit-team, to show **what each screening lens actually selects for at the variable level**.

Table 3.10a. Dimension 1: Income Adequacy (Bankable+ ≥ 0.65)

33a

Variable	Creditworthiness	Mandiri-product	Mandiri-credit-team
Mean Dim 1 score	0.823	0.805	0.813
Mean affordability ratio	17.7%	19.5%	18.7%
Median monthly expenditure	Rp 6.70M	Rp 5.96M	Rp 6.20M

Note. Affordability ratio = monthly installment / monthly EXPEND (see Section 1.5). Source: Authors' calculations from SUSENAS 2025.

Income adequacy differences across schemes are modest. **Creditworthiness selects households with Rp 740,000 higher median monthly expenditure than Mandiri-product** (Rp 6.70 million versus Rp 5.96 million), reflecting the higher weight CW places on this dimension (0.30 versus 0.17). All three populations comfortably clear the affordability threshold, with mean ratios between 17.7% and 19.5%, well below the 30% affordability floor.

Table 3.3b. Dimension 2: Income Stability (Bankable+ ≥ 0.65)

Variable	Creditworthiness	Mandiri-product	Mandiri-credit-team
Mean Dim 2 score	0.854	0.834	0.834
Sub: employment type (2a)	0.909	0.883	0.886
Sub: hours worked (2b)	0.968	0.959	0.950
Sub: working household members (2c)	0.686	0.662	0.666
% salaried (R706 = 4)	79.0%	73.3%	74.7%
% self-employed (R706 = 1+2)	16.7%	22.2%	20.3%
% casual workers (R706 = 5)	1.5%	1.9%	2.1%

Note. R706 = SUSENAS employment status variable. Sub-components scored 0–1 and equally weighted within dimension. Source: Authors' calculations from SUSENAS 2025.

Income stability profiles are broadly similar across schemes, with all three populations majority salaried (73–79%). However, **Mandiri-product admits more self-employed workers (22.2% versus CW's 16.7%)**, not because it is more inclusive of informality, but because its 0.50 weight on Dim 2 means households that score high on employment formality can compensate for weaknesses elsewhere. The paradox is that **the scheme most weighted toward formality does not produce the**

most formally employed population; it produces the largest population overall, diluting formality concentration.

Table 3.3c. Dimension 3: Financial Track Record (Bankable+ ≥ 0.65)

Variable	Creditworthiness	Mandiri-product	Mandiri-credit-team
Mean Dim 3 score	0.669	0.628	0.643
% with savings account	100.0%	98.4%	99.9%
% with formal credit	17.4%	11.6%	12.6%
% with semi-formal credit	10.4%	8.6%	8.7%
% with e-money/digital payments	72.9%	56.3%	60.5%
% with financial services access	99.5%	97.5%	98.9%
% with predatory lending penalty	0.1%	0.5%	0.3%
% with online lending penalty	0.8%	1.3%	1.1%

Note. Positive sub-components: savings (0.45), formal credit (0.20), semi-formal credit (0.10), financial services (0.10), e-money (0.10), leasing (0.05). Penalties: predatory lending, rentenir (-0.20), online lending (-0.10), pawnshop (-0.05).

Source: Authors' calculations from SUSENAS 2025.

Dimension 3 is where the composition gap becomes most visible. **The Creditworthiness-Bankable population has substantially higher financial engagement:** 17.4% hold formal credit compared with 11.6% under Mandiri-product, and 72.9% use e-money or digital payments compared with 56.3%. On the penalty side, the Mandiri-product population carries higher exposure to predatory lending, with online lending usage at 1.3% versus CW's 0.8% and predatory lending (rentenir) exposure at 0.5% versus 0.1%.

These differences arise because **Mandiri-product's heavy weighting on Dim 2 (0.50) allows households with weak financial track records to qualify as long as they hold formal employment.** CW's higher weight on Dim 3 (0.40) filters for demonstrated financial behavior. The Mandiri-credit-team scheme, which weights Dim 3 at 0.30, falls between the two on nearly every indicator. As noted in Section 3.1, online lending records now also appear in SLIK, meaning that the 1.3% online lending exposure in the Mandiri-product population represents both a credit risk signal and a potential SLIK barrier to actual FLPP access.

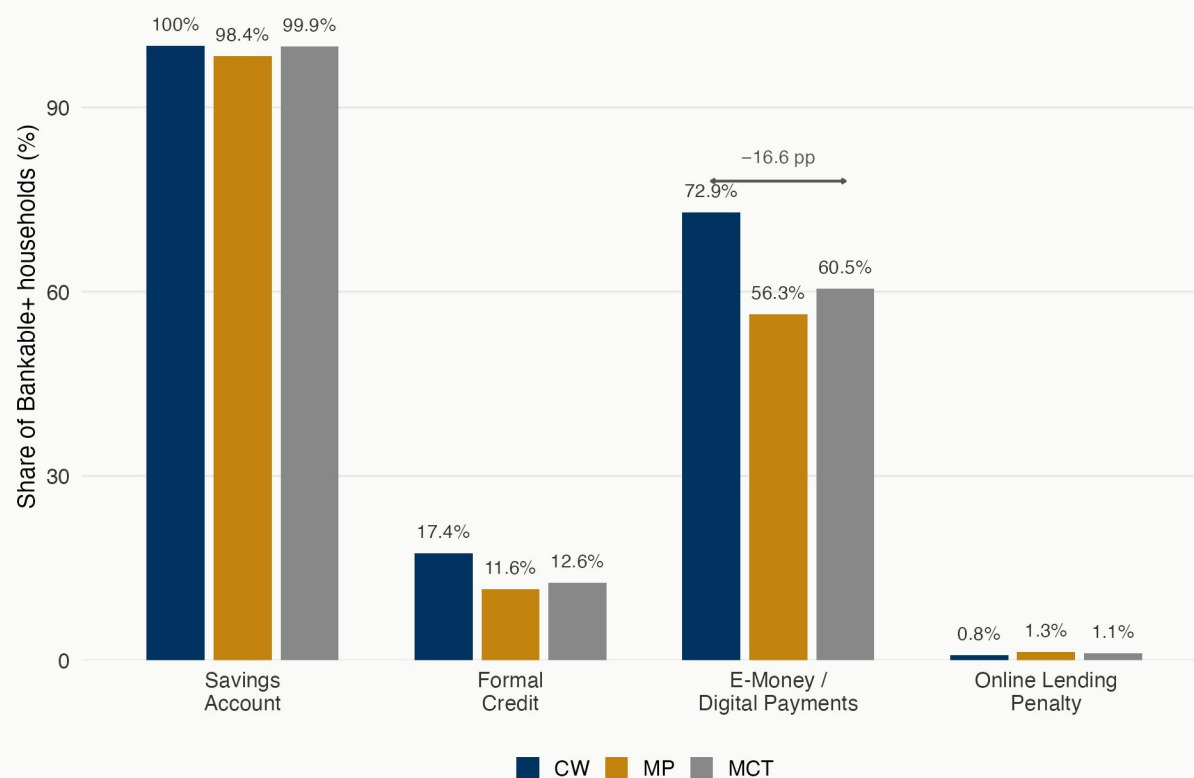


Figure 3.9. Dimension 3 sub-component pass rates by scheme. Grouped bars show the share of Bankable+ households holding each financial product. The 16.6pp e-money gap between CW and MP Bankable+ households (annotated) reflects the formality filter's indirect effect on digital financial inclusion.

Table 3.3d. Dimension 4: Risk Buffer (Bankable+ ≥ 0.65)

Variable	Creditworthiness	Mandiri-product	Mandiri-credit-team
Mean Dim 4 score	0.271	0.235	0.247
% with land ownership	20.7%	16.8%	17.9%
% with cash reserves	19.8%	12.4%	14.5%
% with gold	20.3%	13.9%	15.9%
% with motorcycle	96.5%	93.9%	95.4%
Mean consumer durables (of 10)	2.13	1.85	1.95
Mean social security programs (of 6)	1.14	0.88	0.96
% with insecure tenure	32.9%	36.0%	34.7%

Note. Land+certificate (0.30), cash (0.20), gold (0.10), motorcycle (0.10), durables (0.10), social security (0.10), tenure security (0.10), FIES food insecurity penalty (-0.15). Source: Authors' calculations from SUSENAS 2025.

Risk buffers are thin across all three populations, with no scheme producing a Dim 4 mean above 0.271. However, **the Mandiri-product scheme's zero weight on this dimension means it does not**

distinguish between households with and without financial cushions at all. CW-Bankable households hold 60% more cash reserves (19.8% versus 12.4%), 46% more gold (20.3% versus 13.9%), and 30% more social security coverage (1.14 versus 0.88 programs) than their MP-Bankable counterparts. For a 20-year mortgage, these buffers determine whether a household can absorb a temporary income shock without defaulting. Mandiri's screening does not capture this distinction, in part because the formality filter substitutes for the more granular asset and behavior data that the verification environment cannot reliably surface.

3.4 The Gap Between Credit Judgment and Institutional Screening

To test whether Bank Mandiri's published screening criteria reflect the priorities of a lending professional within the bank, we administered a structured questionnaire to a credit expert in the bank's Mortgage & Auto Loan Group. The expert was asked to rank the four bankability dimensions from most to least important in evaluating KPR FLPP borrowers. **The resulting ranking differs notably from the bank's product-level screening:** the expert placed income adequacy first and employment stability third, while the product criteria load most heavily on employment stability (Table 3.4).

Table 3.4. Expert Dimension Ranking and Derived Scheme Weights

Dimension	Mandiri credit-team Rank	Stillwell	Mandiri-credit-team	Creditworthiness	Mandiri-product
Dim 1: Income Adequacy	1st	4/10	0.40	0.30	0.17
Dim 3: Financial Track Record	2nd	3/10	0.30	0.40	0.33
Dim 2: Income Stability	3rd	2/10	0.20	0.20	0.50
Dim 4: Risk Buffer	4th	1/10	0.10	0.10	0.00

Note. Expert ranking converted to cardinal weights via Stillwell rank-sum: $w_i = (n - r_i + 1) / \sum(n - r_j + 1)$, where $n = 4$ and $r =$ assigned rank (Stillwell et al., 1981; OECD/JRC, 2008). CW weights derived from analyst ranking of credit risk literature. MP weights reverse-engineered from published product criteria. Expert input: officer, Mortgage & Auto Loan Group, Bank Mandiri, April 22, 2026 ($n = 1$).

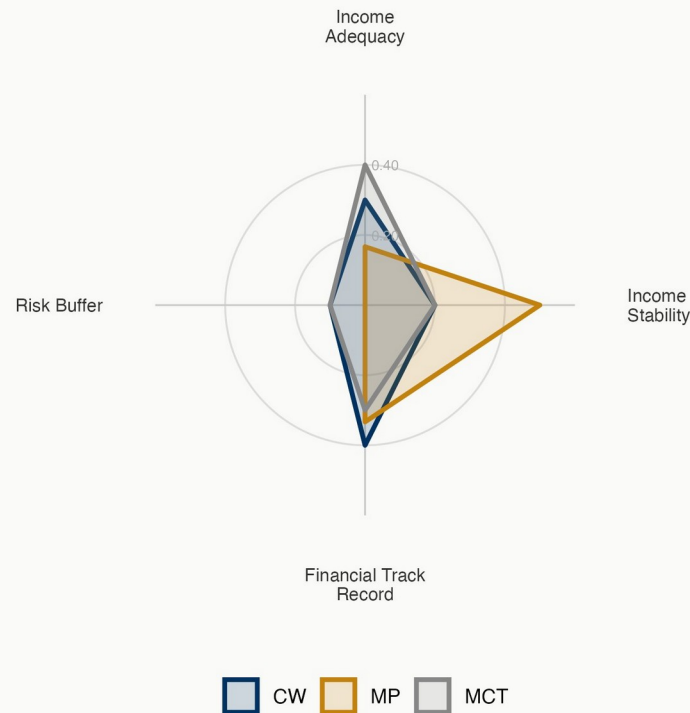


Figure 3.10. Radar chart of weight profiles. Three overlaid polygons show how CW (navy), MP (gold), and MCT (grey) distribute weight across four dimensions. MP's sharp spike toward Income Stability (0.50) and collapse at Risk Buffer (0.00) contrasts with CW's more balanced profile.

The Mandiri-credit-team weights (0.40 / 0.20 / 0.30 / 0.10) align more closely with the independent Creditworthiness scheme (0.30 / 0.20 / 0.40 / 0.10) than with the bank's own product criteria (0.17 / 0.50 / 0.33 / 0.00). **Both the credit expert and the independent assessment place income adequacy and financial track record above employment formality**, while the product criteria invert this ordering. At the High-Confidence Bankable tier (≥ 0.70), the expert-derived scheme qualifies 1.698 million households compared with the product scheme's 2.978 million, a difference of 1.280 million households. The credit expert's professional judgment is more selective but screens on different criteria.

The expert's responses to deal-breaker scenarios reinforce this pattern. When presented with a casual laborer who can comfortably afford the monthly installment, the expert indicated approval. When presented with a salaried worker who has zero savings and no credit history, the expert answered "Depends" rather than an automatic approval. **In the expert's judgment, employment formality alone does not guarantee creditworthiness, and its absence does not preclude it.** The bank's product criteria, by contrast, treat formality as a near-binary gate.

We note three important caveats. First, this input comes from a single respondent ($n = 1$). Institutional credit decisions involve committee processes, and one officer's ranking may not reflect committee-level weighting. Second, the rank-sum method assumes equal spacing between ranks;

the expert may hold a non-linear preference structure that the conversion does not capture. Third, the derived weights were not shown back to the expert for validation. **Despite these limitations, the expert input serves a valuable triangulation function:** it suggests room for closer alignment between the bank’s published screening criteria and the priorities expressed by a lending professional within the bank. The convergence between the expert-derived and independent Creditworthiness weights strengthens the finding that **screening relies heavily on formality, in part because the current environment offers limited alternatives for verifying creditworthiness.**

3.5 The Formality Gradient

The sub-component decomposition in Section 3.3 showed that Mandiri-product selects heavily on employment formality. Table 3.5 makes this visible directly by reporting Bankable+ pass rates for each employment category under all four schemes. **The gradient is steep: salaried workers pass at 77.9% under Mandiri-product, while casual workers pass at 17.2%**, a 60.7 percentage-point gap driven almost entirely by the scheme’s 0.50 weight on Dim 2.

Table 3.5. Bankable+ (≥ 0.65) Pass Rates by Employment Status (R706)

R706	Category	Regulatory	Mandiri-product	Mandiri-credit-team	Creditworthiness	Gap (Reg vs Mandiri-product)
4	Salaried	100.0%	77.9%	71.2%	62.0%	22.1pp
3	Employer + paid	100.0%	70.7%	65.0%	56.8%	29.3pp
1	Self-employed	100.0%	54.0%	43.5%	34.6%	46.0pp
2	Self + unpaid family	100.0%	36.4%	32.2%	24.1%	63.6pp
5	Casual	100.0%	17.2%	16.7%	12.6%	82.8pp
6	Unpaid family	100.0%	4.6%	17.1%	6.5%	95.4pp
0	Not in labor force	100.0%	0.0%	1.0%	0.1%	100.0pp

Note. R706 = SUSENAS employment status. Pass rate = share of program-eligible households in each category that score ≥ 0.65 under the given scheme. Gap = Regulatory minus Mandiri-product pass rate. Scheme names expanded in column headers. Source: Authors’ calculations from SUSENAS 2025.

The gap between Regulatory and Mandiri-product pass rates widens as employment becomes less formal. For salaried workers, the gap is 22.1 percentage points; for casual workers, it reaches 82.8 percentage points. **Of the 2.282 million households that are Regulatory-Bankable but excluded by Mandiri-product screening, 30.5% are salaried and 67.7% are informal.** Nearly a third of the excluded population holds formal employment but fails on other dimensions the bank weights heavily. The remaining two-thirds are informal workers whom the regulation explicitly intended to include.



Figure 3.11. Employment formality slope chart. Lines connect Regulatory Bankable+ rate (100% for all categories) to Mandiri-product Bankable+ rate, revealing the fan pattern of exclusion. The gap widens from 22.1pp for salaried workers to 95.4pp for unpaid family workers.

The formality gradient also has a geographic dimension. Table 3.6 shows that **rural households face a screening gap 10.2 percentage points wider than urban households** under Mandiri-product, despite identical Regulatory pass rates. Rural areas have lower formal employment concentrations, meaning Mandiri’s formality-weighted screening disproportionately excludes rural MBR households. This geographic pattern matters for FLPP allocation: if screening criteria favor formal employment, subsidized mortgages will flow disproportionately toward urban areas even when rural households are equally creditworthy by other measures.

Table 3.5. Urban–Rural Bankable+ (≥ 0.65) Pass Rates Under Regulatory and Mandiri-Product Schemes

Location	Regulatory	Mandiri-product	Gap
Urban	100.0%	61.9%	38.1pp
Rural	100.0%	51.7%	48.3pp
<i>Rural–urban differential</i>	0pp	–10.2pp	+10.2pp wider

Note. Bankable+ combines High-Confidence Bankable and Bankable tiers (≥ 0.65). Urban/rural classification from SUSENAS sampling frame. Source: Authors' calculations from SUSENAS 2025.

3.6 Root Causes and Chapter Synthesis

The evidence presented in Sections 3.1 through 3.5 converges on three root causes that together explain why FLPP disbursement remains below the available pipeline of creditworthy borrowers.

The first root cause is dimensional misalignment. Bank Mandiri's screening loads 0.50 on employment formality and 0.00 on risk buffers. **In the absence of verified income data for informal workers and with limited loan performance history for non-standard borrowers, formality becomes the most reliable signal available.** This produces a screening architecture that is simultaneously more permissive in volume (3.489 million Bankable+ versus CW's 2.652 million) and less rigorous in composition (lower formal credit rates, lower e-money usage, higher online lending exposure). The bank's own credit expert ranked formality third out of four dimensions, producing weights closer to the independent Creditworthiness assessment than to the bank's published criteria. The pattern suggests that institutional screening has adapted to the constraints of the current verification environment rather than reflecting a deliberate risk judgment about the relative importance of each dimension.

The second root cause is the informality verification gap. **The credit expert indicated she would approve a creditworthy informal worker, but the bank currently lacks the infrastructure to verify informal income through non-traditional channels.** The expert's "No" on e-wallet transaction history as income documentation reflects this infrastructure constraint, not a risk judgment. Meanwhile, SLIK has expanded to capture online lending and paylater credit records (POJK 11/2024), but this expansion creates a new barrier rather than a new pathway. BP Tapera initially attributed 111,258 unprocessed FLPP applications to SLIK barriers, though OJK verification found only 3,299 explicitly SLIK-rejected, with the majority of unprocessed applications attributable to weak demand, bank delays, and documentation gaps (Section 3.2). The verification gap is thus two-sided. Banks cannot ingest digital data that would help qualify informal workers, while digital credit data that is captured works to disqualify them.

The third root cause is the quota and fiscal constraint. **Annual FLPP capacity is approximately 350,000 mortgages.** Even the most conservative multi-dimensional assessment in this study, Creditworthiness at High-Confidence Bankable, identifies 1.190 million qualifying households, 3.4 times annual capacity. At the expert-validated Bankable+ level, the pipeline reaches 3.116 million, or

8.9 times capacity. **The binding constraint on FLPP disbursement is not the supply of creditworthy borrowers.** It is the fiscal envelope within which the program operates. Screening reform alone, without corresponding expansion of FLPP quota, would improve the composition of who receives subsidized mortgages but would not expand the number.

These three root causes are causally linked: the verification gap and fiscal constraint create the environment in which dimensional concentration is a rational response. When banks lack infrastructure to verify informal income or assess risk buffers, formality becomes the default screening signal. Addressing the verification gap through digital income infrastructure and recalibrating guarantee terms would give banks the information and risk-sharing needed to distribute screening across multiple dimensions. The fiscal constraint requires government-level decisions about FLPP funding. Chapter 4 examines how four comparator countries have addressed analogous challenges, and Chapter 5 translates these root causes into actionable policy alternatives for both policymakers and Bank Mandiri.

Chapter 4

International Benchmarking

4.1 Framework for Comparison

Chapter 3 identified three root causes behind the gap between FLPP’s regulatory design and bank screening practice: a concentration of screening weight on employment formality, driven in part by the absence of alternative verification infrastructure; an informality verification gap that blocks some borrowers while failing to capture alternative data for others; and a fiscal capacity constraint that limits disbursement even when the bankable pipeline exceeds supply. These root causes are not unique to Indonesia. Other middle-income countries have confronted similar barriers in housing finance and developed institutional responses worth examining.

We selected four comparator countries, each chosen because it has deployed a specific instrument targeting one of the three root causes identified in Chapter 3. Colombia’s Fondo Nacional de Garantías (FNG) provides partial credit guarantees that address the consequence of dimensional misalignment, namely bank risk aversion toward borrower segments that lack conventional collateral or buffer assets (Ferraro, 2011). India’s Account Aggregator (AA) framework enables consent-based digital sharing of financial data across institutions, offering a verification pathway for workers whose income is real but undocumented in traditional bank systems (Reserve Bank of India, 2016; Department of Financial Services, 2025). Mexico’s INFONAVIT creates a dedicated fiscal channel for housing through mandatory employer payroll contributions, generating a funding stream independent of annual budget appropriations (INFONAVIT, 2025). China’s Housing Provident Fund (HPF) serves as a cautionary case: a payroll-linked housing fund structurally similar to Indonesia’s Tapera that, without complementary guarantee or verification reforms, has reinforced rather than reduced the formality bias in housing access (Zhou, 2020; Chen et al., 2024).

Table 4.12. Country Root Cause Mapping

Country	Root Cause Addressed	Key Instrument	Mechanism
Colombia	RC#1: Dimensional misalignment (consequence)	FNG credit guarantee + Mi Casa Ya	Partial guarantee shifts residual risk from bank to fund
India	RC#2: Informality verification gap	Account Aggregator + PMAY-CLSS	Consent-based digital data sharing replaces paper documentation
Mexico	RC#3: Quota and fiscal constraint	INFONAVIT + CONAVI	5% employer payroll contribution creates dedicated housing fund
China	Cautionary case	Housing Provident Fund (HPF)	Employer-employee co-contribution (5–12%) without guarantee or verification reform

Two points of framing discipline are important before we proceed. First, the Colombia case addresses the **consequence** of dimensional misalignment, not the misalignment itself. A credit guarantee changes the cost to the bank of getting the weighting wrong; it does not change how the bank weights its screening dimensions. This distinction matters when we adapt these instruments for the Indonesian context in Chapter 5. Second, Section 4.6 applies a transferability filter, asking whether each instrument could function within Indonesia's institutional architecture. It does not evaluate or compare the Indonesia-adapted alternatives against each other. That comparative evaluation, using the six criteria introduced in Chapter 5.1, belongs in Chapter 5.

4.2 Absorbing the Cost of Screening Errors: Colombia

Colombia's housing finance architecture addresses a challenge structurally parallel to Indonesia's. Approximately 56.6% of the urban labor force worked informally as of 2011 (Arbeláez, 2011), limiting banks' ability to verify income through conventional payslip documentation. Colombia's response combines three instruments: a proxy means test for subsidy targeting (Sisbén IV), an interest rate and downpayment subsidy program (Mi Casa Ya), and a partial credit guarantee for mortgage lenders (Fondo Nacional de Garantías, FNG). **Indonesia has near-equivalents of all three:** DTKS (Data Terpadu Kesejahteraan Sosial), FLPP, and Jamkrindo's Penjaminan KPR Sejahtera FLPP.

The Colombian Architecture

The FNG, established in 1982 as a mixed-economy entity with the government holding a majority stake, is supervised by the Superintendencia Financiera de Colombia (Arbeláez, 2011). The FNG began offering partial mortgage guarantees for Vivienda de Interés Social (VIS) housing in 2004. The FNG relies on the risk assessment made by the lending intermediary. Each financial intermediary receives a maximum portfolio value (MPV) and independently evaluates and approves guaranteed loans within that limit. For VIS housing, the guarantee provides coverage of up to 80% of the housing unit value, with loan values capped at 108 minimum wages. Coverage lasts seven years or less, at a monthly cost of 0.0943% plus VAT of outstanding debt. The guarantee activates when arrears surpass 18 months or when the financed housing unit is surrendered as loan payment. Intermediary delinquency is monitored continuously, and if rates rise excessively, the intermediary's MPV is reduced (Arbeláez, 2011).

Mi Casa Ya, launched in 2015, provides eligible households with a downpayment subsidy (20 to 30 minimum wages, roughly USD 6,000 to 10,000) and seven years of interest rate coverage through the FRECH reserve fund. Subsidy size is tiered according to the household's Sisbén IV classification (MVCT, 2023). Sisbén IV, Colombia's national proxy means test created in 1994 and now in its fourth methodology, classifies households into vulnerability groups (A through D) using observable characteristics including consumption of durable goods, housing conditions, and human capital (Castañeda, 2005; Vélez et al., 1998). However, Sisbén IV determines only subsidy eligibility. Applicants must still obtain mortgage pre-approval from a financial intermediary, and

banks apply their own documentation and creditworthiness requirements during that process. Sisbén does not replace formal bank screening.

Indonesia's Existing Parallel Infrastructure

The comparison reveals more similarity than difference. DTKS serves the same function as Sisbén IV, classifying households by socioeconomic vulnerability for social assistance targeting. FLPP operates like Mi Casa Ya, offering a fixed 5% interest rate, 20-year tenor, and 1% downpayment for MBR households. Jamkrindo's KPR FLPP guarantee mirrors FNG's role, providing credit guarantee coverage for the bank's subsidized mortgage portfolio. In 2024, Jamkrindo's FLPP guarantee volume reached **Rp 42.74 trillion**, growing 56.95% year-on-year and exceeding its annual target by 254% (Jamkrindo, 2025). This is not a nascent program. It is substantial institutional infrastructure.

Two verified structural differences are worth noting. First, FNG relies entirely on the intermediary's borrower assessment and does not conduct its own borrower-level credit analysis (Arbeláez, 2011). Jamkrindo, by contrast, conducts independent 5C due diligence (Character, Capacity, Capital, Collateral, Condition) on guaranteed parties (Jamkrindo, 2025), creating a double layer of creditworthiness assessment. Whether this additional layer improves portfolio quality or simply reinforces the bank's screening pattern is an empirical question this analysis cannot settle, but it does mean that any formality bias in the bank's screening is compounded rather than checked by the guarantor.

Second, Colombia integrates its proxy means test (Sisbén) directly into the housing subsidy pipeline. Sisbén classification determines whether a household qualifies for Mi Casa Ya and at what subsidy tier. In Indonesia, FLPP eligibility is verified through BP Tapera's SiKasep system using regulatory criteria (income ceilings, non-homeownership, employment documentation), while DTKS feeds into other government housing programs, including BSPS (self-help housing assistance). The two systems operate through separate institutional channels, and DTKS vulnerability classifications are not referenced in publicly documented FLPP eligibility requirements.

Relevance to Root Cause #1

The FNG guarantee addresses the consequence of dimensional misalignment identified in Chapter 3: bank risk aversion toward borrower segments lacking conventional documentation. By absorbing a share of expected loss, the guarantee reduces the penalty banks face when borrowers default, theoretically encouraging lending to segments that would otherwise be screened out. However, the guarantee does not change how banks weight their screening dimensions. It changes the cost of the outcome when those weights produce errors.

Indonesia's situation is instructive precisely because the instruments already exist. The question for Chapter 5 is not whether to create a guarantee fund, but whether to reconfigure the existing one. Three specific design parameters warrant examination: whether Jamkrindo's independent 5C screening adds value or duplicates the formality filter, whether connecting DTKS to the FLPP eligibility pipeline could broaden the pool that reaches bank screening, and whether the

guarantee's own product terms require updating. Jamkrindo's published KPR FLPP product sheet lists income ceilings of Rp 4 million (tapak) and Rp 7 million (susun), requires a minimum of one year of work or business tenure, and demands formal documentation including SIUP, SK Pengangkatan, or slip gaji (Jamkrindo, n.d.). All three parameters are more restrictive than the current regulatory framework: PermenPKP 5/2025 sets zone-based income ceilings of Rp 8.5 million to Rp 14 million, Per. BP Tapera 9/2021 imposes no tenure requirement, and the regulation provides alternative documentation pathways including lurah attestation (Pasal 26(2)(h)). If the guarantor's eligibility criteria have not been updated to match the current regulatory parameters, Jamkrindo's screening would compound the formality bias identified in Chapter 3 at a second institutional layer.

4.3 Verifying Income Without Paper: India

Chapter 3 identified the informality verification gap as Root Cause #2: SLIK captures pinjol data that can block FLPP applicants, though OJK verification showed the true SLIK barrier far smaller than initially reported (Section 3.2), while e-wallet and mobile transaction data that could verify informal income stability remains absent from the screening process. The gap is two-sided. The system penalizes informal borrowers for what it can see (micro-debts) and ignores evidence that could help them (transaction patterns). India's Account Aggregator (AA) framework offers a model for addressing the verification side of this problem.

The Account Aggregator Framework

Launched publicly in September 2021, India's AA framework is a consent-based digital infrastructure that enables secure sharing of financial data across institutions. Account Aggregators are a specialized category of Non-Banking Financial Company (NBFC) regulated by the Reserve Bank of India (RBI) under its 2016 Master Directions. They function as data-blind intermediaries: AAs facilitate encrypted transfer of financial information from Financial Information Providers (FIPs, such as banks and insurers) to Financial Information Users (FIUs, such as lenders and wealth managers), but they cannot read, store, or process the data themselves. The user retains full control over what is shared, with whom, for what purpose, and for how long. Consent is explicit, purpose-specific, and instantly revocable (RBI, 2016; Department of Financial Services, 2025).

As of December 2025, the ecosystem had reached significant scale: 126 financial institutions live as both FIP and FIU, over 2.61 billion financial accounts enabled for data sharing, and 252.9 million users with linked accounts (Department of Financial Services, 2025). During India's G20 presidency in 2023, the AA framework was recognized as foundational Digital Public Infrastructure (DPI), serving as the data exchange layer alongside Aadhaar (identity) and UPI (payments).

From Infrastructure to Housing Products

The AA framework's significance for housing finance lies in what it enables for borrowers without conventional documentation. Indian housing finance companies and banks have developed loan

products specifically designed for borrowers without formal income documentation. Lenders such as PNB Housing (Roshni and Unnati schemes), Aavas Financiers (Cash Salaried Plus), and HDFC (Reach) offer housing loans that assess repayment capacity through bank transaction patterns, UPI history, and cash-flow analysis rather than salary slips or income tax returns. The AA framework is the infrastructure enabling this shift: it provides lenders with verified, tamper-proof financial data directly from the borrower's bank, eliminating reliance on physical paperwork that informal workers cannot produce.

The framework's consent architecture addresses the privacy concern directly: data flows only when the borrower applies for a loan and explicitly authorizes the transfer. The borrower chooses what data to share, with whom, for what purpose, and for how long, and can revoke consent instantly.

However, the framework faces practical limitations. As of December 2025, approximately 38% of borrowers had AA-enabled accounts, meaning 62% still required traditional PDF-based bank statement analysis. Lenders that launched AA-only lending in 2024–2025 reported application failure rates of 62% at the data collection stage when the borrower's bank was not yet AA-enabled (Salman et al., 2025). Geographic disaggregation of AA adoption between urban and rural segments is not yet available. Rural borrowers who depend on NBFCs or informal credit channels remain underserved by the AA ecosystem (Sahamati, 2024).

The Housing Subsidy Context: PMAY

India's Pradhan Mantri Awas Yojana-Urban (PMAY-U), launched in 2015 with the goal of "Housing for All," provided interest subsidies of 6.5% for Economically Weaker Sections (EWS) and Low Income Groups (LIG) on home loans up to Rs 6 lakh. The Credit Linked Subsidy Scheme (CLSS) component disbursed Rs 58,885 crore in interest subsidies to over 2.5 million beneficiaries before closing in March 2022 (Ministry of Housing and Urban Affairs, 2025). PMAY-U 2.0, launched in September 2024, targets an additional 10 million urban beneficiaries over five years with subsidies of up to Rs 1.80 lakh per household. The AA framework was not formally integrated into PMAY-CLSS eligibility, but its adoption by housing lenders is creating the practical infrastructure for income verification without paper documentation.

Lesson for Indonesia

The AA model is relevant to Indonesia because the building blocks for a similar infrastructure partially exist, though they fall into two distinct categories. On the payment side, Indonesian banks and e-money providers already hold digital transaction records: 56.3% of Mandiri-product Bankable+ households and 72.9% of Creditworthiness Bankable+ households use e-money (Chapter 3). These records capture spending patterns, top-up frequency, and transaction regularity, but no Indonesian bank currently uses e-wallet transactional data as formal income verification for KPR applications. On the credit side, all 96 licensed fintech lending platforms are now mandatory SLIK reporters under POJK 11/2024 (effective July 2025), meaning pinjol and paylater borrowing histories are already visible to banks during KPR screening. As documented

above, SLIK visibility currently functions as a barrier rather than a bridge, and the system lacks the infrastructure to diagnose why applications fail.

Indonesia has made initial progress in financial data infrastructure. Bank Indonesia's SNAP framework (Standard Nasional Open API Pembayaran, launched 2021) standardizes payment APIs, and an Open Finance Roadmap is expected by 2026. However, the current architecture is bank-centric, with financial institutions controlling third-party data access through bilateral agreements. What remains absent is the consumer-directed element, a regulated intermediary through which an individual borrower can consent to share financial data from multiple institutions with a lender, equivalent to India's AA. The existing digital infrastructure captures credit behavior (and penalizes it) but does not yet capture income behavior. BP Tapera also operates a digital application system (SiKasep). The gap extends beyond bank screening: Jamkrindo's FLPP guarantee product also requires SLIK clearance, and a digital verification layer that could distinguish harmful indebtedness from routine micro-transactions would address the verification gap at both the bank and guarantor level simultaneously.

Two caveats are important. First, the AA framework took four years from public launch to reach 252.9 million users, and coverage remains incomplete. Any Indonesian equivalent would face a similar adoption curve. Second, India's experience shows that digital verification complements rather than replaces institutional credit assessment. AA data enriches the bank's analysis but does not override it. Chapter 5 examines what an Indonesia-adapted digital verification infrastructure would require.

4.4 Funding Housing Beyond the Annual Budget: Mexico

Root Cause #3 identified in Chapter 3 is the quota and fiscal constraint: even the most conservative pipeline estimate (1.190 million Creditworthiness High-Confidence Bankable households) exceeds FLPP's annual disbursement capacity of approximately 350,000 mortgages by 3.4 times. The constraint is binding regardless of how banks screen. Mexico's INFONAVIT model addresses this root cause by creating a dedicated fiscal channel for housing finance that operates independently of annual budget appropriations.

INFONAVIT's Architecture

The Instituto del Fondo Nacional de la Vivienda para los Trabajadores (INFONAVIT), established in 1972 under Article 123 of the Mexican Constitution, mandates that all formal-sector employers contribute 5% of each employee's integrated daily salary to a national housing fund. These contributions accumulate in individual worker accounts managed by INFONAVIT and can be used to finance home purchase, construction, renovation, or mortgage repayment. Loan repayments are deducted directly from worker salaries, minimizing collection risk and default rates (INFONAVIT, 2025).

The scale is substantial. INFONAVIT is the largest mortgage lender in Latin America and the fourth largest worldwide, with over 12 million mortgages on its books and a loan portfolio of

approximately USD 70 billion, accounting for roughly 70% of the Mexican mortgage market by asset volume (World Finance, 2014). For households that fall below INFONAVIT's lending threshold, the Comisión Nacional de Vivienda (CONAVI) provides capital subsidies that can be stacked with INFONAVIT credits, creating a layered financing structure where the payroll contribution covers the mortgage, the subsidy covers the downpayment gap, and payroll deduction covers repayment.

Parallels and Differences with Indonesia

Indonesia's Tapera (Tabungan Perumahan Rakyat), established by UU No. 4/2016 and managed by BP Tapera, is structurally modeled on systems like INFONAVIT. Under PP 21/2024, Tapera's mandatory contribution is set at 3% of salary (0.5% employer, 2.5% employee), compared to INFONAVIT's 5% employer-only contribution. Both are mandatory savings programs with accumulated funds channeled into housing finance. BP Tapera currently manages the FLPP pipeline, and FLPP's budget has grown from Rp 24.6 trillion in 2024 to Rp 41.99 trillion in the revised 2025 allocation (Bank Mandiri, Office of Chief Economist, 2025).

However, two structural differences limit the comparison. First, INFONAVIT's mandatory 5% employer contribution creates a self-sustaining fiscal base independent of annual state budget appropriations. Tapera's contribution rate is legally fixed at 3% under PP 21/2024, but contribution collection from the broader workforce has not yet begun. Private-sector employers have until May 2027 to register workers (PP 25/2020 Pasal 68), and as of mid-2024, BP Tapera had not started collecting contributions from new participants beyond legacy PNS Bapertarum members. FLPP's 2026 budget of Rp 37.1 trillion is funded through DIPA (Rp 25.1 trillion), recycled loan repayments (Rp 10.4 trillion), and carry-over balances (Rp 1.6 trillion), all sourced from the state budget and the program's own revolving fund rather than from Tapera participant contributions (BP Tapera, 2026). Until Tapera contributions from the broader workforce begin flowing, FLPP remains dependent on state budget allocations, making it vulnerable to the same fiscal pressure that suspended Colombia's Mi Casa Ya in December 2024 (Fonvivienda, 2024).

Second, and more critically for this analysis, **INFONAVIT only covers formal-sector workers**. The 5% payroll contribution requires a registered employment relationship. Informal workers, self-employed individuals, and gig economy participants are excluded from the system unless they voluntarily enroll through a separate regime. This means INFONAVIT addresses fiscal capacity (Root Cause #3) while reinforcing the same formality bias identified in Root Cause #1. The system expands funding without expanding access.

Lesson for Indonesia

INFONAVIT demonstrates that a payroll-linked housing fund can achieve massive scale, with 70% market share and a self-sustaining fiscal base that insulates housing finance from annual budget politics. The institutional model validates Tapera's design logic. However, INFONAVIT's five-decade experience also confirms a structural limitation: **a payroll-linked system expands housing access for formal workers but does not reach the informal population that constitutes the core of the FLPP eligibility gap**. For Indonesia, where 67.7% of excluded

households are informal workers, replicating INFONAVIT's fiscal mechanism without addressing the formality exclusion would expand the supply of mortgage capital while leaving the demand-side bottleneck intact. This tension, between fiscal capacity and formality exclusion, recurs in the China case that follows.

4.5 When the Fund Inherits the Bias: China

China's Housing Provident Fund (HPF) is the closest structural analog to Indonesia's Tapera. Both are mandatory employer-employee co-contribution schemes that channel payroll savings into housing finance. The HPF's experience over three decades illustrates what happens when a payroll-linked housing fund operates without complementary reforms to address formality exclusion and verification gaps.

HPF Structure

Established as part of China's housing marketization reform in the early 1990s, the HPF requires participating urban employees and employers to jointly deposit a proportion of wages, typically 5–12% depending on the municipality, into personal HPF accounts on a monthly basis. Participants become eligible to withdraw deposits for housing purchases after meeting specific conditions and can apply for HPF loans at preferential interest rates significantly below commercial mortgage rates. The system offers three structural advantages over market-rate borrowing: HPF contributions are deducted from taxable income, employers provide a 1:1 matching contribution, and HPF loan interest rates are substantially lower than commercial alternatives (Zhou, 2020).

The Formality Exclusion Problem

The HPF's documented limitation is its coverage bias. Research consistently finds that the system mainly covers employees of administrative bodies, public institutions, and enterprises with relatively strong economic performance, while exercising an exclusionary effect on low-income families, flexible employment personnel, temporary workers, and migrant populations (Zhou, 2020; Chen et al., 2024). Loan applications typically require 6 to 12 consecutive months of contributions, a threshold that screens out workers with unstable employment or frequent job changes. Only 5.6% of China's floating population possessed an HPF account in 2013, primarily because their employers did not provide them with this benefit (Li & Sun, 2018, as cited in Chen et al., 2024).

The fund was designed as a universal housing support system, but its payroll-based collection mechanism makes universality structurally impossible in an economy with significant informality. China's seventh national census recorded 376 million migrants at the end of 2020, accounting for 41.7% of the urban population. A housing finance system that structurally excludes this population from its primary benefits is not merely inequitable. It is incomplete as a policy instrument for urbanization.

Parallel to Indonesia

The parallel to Tapera is direct. Tapera's mandatory 3% contribution (0.5% employer, 2.5% employee, per PP 21/2024) requires a registered employment relationship. Pekerja mandiri (self-employed workers) are included in the regulation's language, but the implementation mechanism for irregular-income workers, those without fixed monthly salaries from which contributions can be deducted, remains underdeveloped. Indonesia's informal workforce faces the same structural barrier that excludes Chinese migrant workers from HPF benefits: the payroll deduction mechanism presupposes a formal payroll.

China's experience also reveals a geographic dimension. Research examining 287 Chinese cities found significant spatial heterogeneity in HPF performance, with access performance between cities tending to widen and diverge even as process and outcome metrics converged (Chen et al., 2023). Indonesia's own geographic concentration, where 51% of the Creditworthiness Bankable+ pipeline sits in 20 districts dominated by DKI Jakarta and Jawa Barat, suggests that a payroll-linked fund without geographic rebalancing mechanisms would reinforce existing spatial concentration rather than distribute housing access more broadly.

What the Cautionary Case Shows

The HPF demonstrates that a payroll-linked housing fund, without complementary guarantee reform (Section 4.2), verification infrastructure (Section 4.3), or explicit mechanisms to include informal workers, will replicate and institutionalize the formality bias that Chapters 2 and 3 documented in Indonesia's current screening system. The funding mechanism becomes self-reinforcing: formal workers contribute, accumulate balances, qualify for loans, and purchase homes, while informal workers remain outside the system entirely. The HPF does not create formality bias. It inherits it from the labor market and locks it into the housing finance architecture.

As of 2025, this structural limitation has not been reformed. China's recent social security updates focus on portability and digitization rather than expanding HPF coverage to informal or migrant workers. Pilot voluntary contribution programs exist in selected cities (Chen et al., 2024) but have not achieved meaningful scale. Individual contributions remain structurally impossible: the HPF requires an employer to open the account and make matched deposits. After more than three decades of operation, the HPF's formality exclusion is not a transitional problem awaiting a fix. It is a durable feature of the design.

4.6 What Transfers and What Does Not

The four cases above identify instruments that address specific root causes. This section applies a transferability filter: could each instrument function within Indonesia's existing institutional architecture? The question is not whether Indonesia should adopt these instruments, that comparative evaluation belongs in Chapter 5, but whether the institutional preconditions for adoption exist.

We assess transferability on four dimensions: whether Indonesia has the institutional infrastructure the instrument requires, whether the regulatory environment is compatible, what the approximate fiscal cost would be, and how long implementation would take.

Table 4.13. Transferability Assessment

Dimension	Colombia (FNG → Jamkrindo)	India (AA → Digital Verification)	Mexico (INFONAVIT → Tapera)
Institutional readiness	High. Jamkrindo already operates a KPR FLPP guarantee at Rp 42.74T volume. The institution exists; the question is product-term recalibration.	Medium. SNAP framework exists (BI, 2021). 96 fintech lenders report to SLIK. SiKasep operational. Missing: consumer-directed consent layer.	Medium-High. BP Tapera exists with legal mandate under UU 4/2016. PP 21/2024 sets 3% contribution. Collection infrastructure not yet operational.
Regulatory compatibility	High. OJK regulates guarantee institutions. Per. BP Tapera 9/2021 accommodates informal borrowers. Gap is between Jamkrindo’s terms and current regulation.	Medium. UU 27/2022 (PDP) provides legal basis for consent-based data sharing. Current open banking model is bank-centric; consumer-directed sharing needs new architecture.	High. UU 4/2016 and PP 21/2024 provide the complete legal framework for a payroll-linked housing fund.
Fiscal cost	Low. Product-term recalibration is administrative. Expanding coverage increases contingent liability within existing institutional budget.	Medium. Technology investment, regulatory development, and institutional coordination. No direct subsidy cost.	Low (short-term). FLPP receives Rp 37.1T from APBN and recycled repayments. Medium-term depends on when Tapera contributions begin.
Timeline	Near-term (months). Product-term updates through Jamkrindo’s internal governance. DTKS connection requires inter-agency coordination.	Medium-term (2–4 years). India’s AA took four years to reach 252.9M users. Indonesia would need regulatory framework, consent infrastructure, and lender adoption.	Already underway. Legal framework exists. Binding constraint is 2027 enrollment deadline and whether collection begins on schedule.

Three observations emerge from this assessment.

First, the Colombia-to-Jamkrindo transfer has the highest feasibility because the receiving institution already exists and operates at scale. The transfer is not “build a guarantee fund” but “update the product terms of an existing guarantee fund.” The specific parameters requiring attention, income ceilings (Rp 4 million/7 million vs. PermenPKP 5/2025 ceilings of Rp 8.5 million–14 million), tenure requirements (1 year vs. no regulatory minimum), and documentation pathways (formal documents only vs. lurah attestation), are administrative decisions within Jamkrindo’s governance structure.

Second, the India-to-Indonesia transfer has the longest lead time because Indonesia lacks the core infrastructure: a consumer-directed, consent-based data exchange framework. SNAP provides the payment API layer, and SLIK provides the credit reporting layer, but neither enables a borrower to direct their own financial data from multiple institutions to a lender in real time. Building this layer requires regulatory development, technology investment, and institutional coordination across OJK, Bank Indonesia, and financial institutions. India's experience suggests a minimum four-year adoption curve even after launch.

Third, the Mexico-to-Tapera transfer is the most advanced because Tapera's legal architecture already mirrors INFONAVIT's design. The remaining question is operational, not structural: when will contribution collection from the broader workforce begin? However, the China cautionary case in Section 4.5 demonstrates that completing this transfer without simultaneously addressing the guarantee gap (Section 4.2) and verification gap (Section 4.3) would replicate the HPF's formality exclusion pattern. **The fiscal instrument is the easiest to build and the most dangerous to build alone.**

These transferability assessments feed into Chapter 5, where two alternatives, fixing existing instruments and building new ones, are evaluated against the status quo using six criteria. The transferability filter determines what is possible. Chapter 5 determines what to recommend and in what sequence.

Chapter 5

Alternatives and Recommendations

5.1 Evaluation Criteria and the Eligibility Frontier

Chapters 2 and 3 established what the problem looks like: 5.770 million program-eligible households, a 14.5 percentage-point swing between bankability definitions, and screening concentrated on employment formality where it could be distributed across multiple dimensions. Chapter 4 mapped four international instruments to the three root causes that drive this pattern. This chapter evaluates two alternatives against the status quo, using a structured framework drawn from the Eightfold Path (Bardach & Patashnik, 2020).

We apply six evaluation criteria, grouped into three tiers by weight. Table 5.1 summarizes the framework.

Table 5.14. Evaluation Criteria and Weights

Criterion	Weight	Question Answered
Effectiveness	20%	How many additional households gain Bankable+ status or enter the eligible base?
Efficiency	20%	How many households are reached per unit of fiscal cost?
Equity	20%	Does the alternative reduce or reinforce the formality gradient identified in Chapter 3?
Feasibility	15%	How many institutional actors must coordinate, and does the legal authority already exist?
Timing	15%	How quickly can the alternative produce measurable results?
Cost	10%	What is the direct fiscal expenditure and administrative burden?

The top tier, effectiveness, efficiency, and equity, carries 60% of the total weight. This reflects the nature of the policy problem. **The core challenge is access and inclusion, not fiscal management.** Chapters 2 and 3 demonstrated that the binding constraints are dimensional misalignment in bank screening, a verification infrastructure gap for informal workers, and a quota ceiling that forces selection among a pipeline far larger than annual capacity. An evaluation framework that weighted cost equally with effectiveness would implicitly treat fiscal caution as equivalent to solving these structural barriers.

Feasibility and timing occupy the middle tier at 15% each. These criteria matter because the alternatives operate within Indonesia's existing institutional architecture, where coordination between BP Tapera, OJK, Kemenkeu, Jamkrindo, and individual banks is neither instantaneous nor

costless. Mandiri's operational reality, disbursing 11,122 units in 2025 within a 40-bank system that processed 278,868 total, means that even a well-designed reform requires institutional buy-in and sequencing.

Cost receives the lowest weight at 10%. This is not because fiscal discipline is unimportant, but because the government has already revealed that fiscal expansion is not the binding constraint on FLPP. The FLPP budget rose from Rp 24.6 trillion in 2024 to Rp 41.99 trillion in revised 2025 allocations, a 71% increase in a single budget year, before settling at Rp 37.1 trillion for 2026. **A government that nearly doubled its housing finance commitment in one year has signaled that it is willing to spend.** The question this chapter addresses is what to spend it on and how to structure the instruments that channel it.

The Eligibility Frontier

Before evaluating alternatives, we test the most intuitive policy lever: expanding the eligible base itself. If more households could enter the FLPP affordability window, would that solve the access problem?

We tested an affordability threshold shift from 30% to 33%. This brings 0.665 million net new households into program eligibility after applying all remaining FLPP filters (non-homeowner status, income ceilings). However, when we score these new entrants under the Creditworthiness scheme, **only 0.096 million (14.4%) reach Bankable+ status**, compared to 46.0% in the existing base. The near-miss population clusters at Dim 1 scores of 0.67 to 0.70, mechanically close to the Bankable+ threshold, but their multi-dimensional profiles remain weak. Under the Mandiri-product scheme, a more generous 41.2% of the near-miss group scores Bankable+, but this is precisely because Mandiri-product places heavy weight on employment formality and zero weight on risk buffers, the screening concentration that Chapter 3 identified as the problem.

The binding constraint on FLPP access is structural, not a matter of adjusting thresholds.

Widening the affordability window adds households to the denominator without proportionally adding creditworthy ones to the numerator. Dim 4 (risk buffer), which records the lowest mean scores across all top 20 districts (0.172 to 0.256), cannot be addressed by shifting an income cutoff. It requires instruments that either absorb the risk that Dim 4 measures or build the verification infrastructure that makes informal income visible.

The analysis therefore focuses on the 5.770 million already-eligible base. Within this population, pipeline multiples range from 7.6× annual capacity under Creditworthiness Bankable+ to 10.0× under Mandiri-product Bankable+. The system disbursed 278,868 units across 40 banks in 2025. **The question is not whether enough qualified borrowers exist but who gets selected and who gets excluded.** The formality gradient documented in Chapter 3, where salaried workers pass at 62.0% and self-employed workers at 34.6% under Creditworthiness, shows that this selection is not neutral. The two alternatives evaluated below address the instruments that shape it.

5.2 The Status Quo: Current Trajectory

The status quo is not a frozen baseline. Several changes are already underway or within the control of individual institutions acting alone. This section documents them, not as recommendations, but as the trajectory the system is already on. The alternatives in Sections 5.3 and 5.4 are evaluated against this moving baseline, not against a hypothetical world where nothing changes.

Reweighting as Diagnostic Observation

Scenarios 1 and 2 quantify the gap between what Mandiri’s current screening selects and what alternative weighting schemes would select from the same population. Under Mandiri-product weights (0.17/0.50/0.33/0.00), 3.489 million households score Bankable+. Shifting to Creditworthiness weights (0.30/0.20/0.40/0.10) drops that to 2.652 million, a swing of 0.837 million households and 14.5 percentage points. Shifting to Mandiri-credit-team weights, derived from the bank’s own credit expert, produces 3.116 million Bankable+, a 6.5 percentage-point reduction.

This is not a policy recommendation. A policymaker reading this chapter cannot instruct a bank to change how it weights its internal screening criteria, and a bank manager cannot operationally “apply Stillwell weights” to a loan officer’s assessment. **The reweighting scenarios make the bias visible, not actionable.** They show that Mandiri’s current screening concentrates on employment formality (Dim 2 = 0.50) and assigns zero weight to risk buffers (Dim 4 = 0.00), while the bank’s own credit expert would rank income adequacy first and formality third. The 14.5 percentage-point swing between Mandiri-product and Creditworthiness is not a modeling artifact. It is the quantified consequence of screening on one dimension where the bank could screen on several.

The real-world translation of “reweighting” is the concrete instruments evaluated in Alternatives A and B. When a credit guarantee absorbs Dim 4 risk, the effective weight on that dimension falls toward zero in the bank’s lending decision, not because anyone changed a formula, but because the economic exposure it measured has been transferred elsewhere. When digital income verification makes informal earnings observable, the effective weight on employment formality drops, because formality was always a proxy for verifiability, not for repayment capacity itself.

SLIK Relaxation: Already Underway

In April 2026, OJK announced that SLIK displays for FLPP applications will exclude outstanding debts below Rp 1 million. This responds to BP Tapera’s initial report that 111,258 FLPP credit applications had gone unprocessed by banks, which BP Tapera attributed to small fintech debts in SLIK. However, OJK’s own verification told a different story: of the applications reviewed, only **3,299 were explicitly rejected due to SLIK status**, and the Minister of Finance concluded that as few as 100 involved debts below Rp 1 million (Pusparisa & Nugraha, 2025). The remaining unprocessed applications reflected weak demand, bank follow-up delays, incomplete documentation, and non-SLIK eligibility failures. Under POJK 11/2024, all 96 licensed P2P lending platforms now report to SLIK, which means that a Rp 200,000 paylater balance from a fintech app can, in principle, block a 20-year mortgage application, but this mechanism accounts for a much smaller share of application failures than initially claimed.

The relaxation is a welcome correction that validates this analysis’s finding on Root Cause #2 (the informality verification gap has a punitive side). However, its scope is **even narrower than the original framing suggested**. Rather than unblocking 111,000 households, the corrected data indicates that the SLIK threshold affected a small fraction of unprocessed applicants. The broader problem is that banks are not processing FLPP applications for multiple reasons the system cannot distinguish, and the relaxation addresses only one of them. It does not address the 0.837 million-household gap between Mandiri-product and Creditworthiness screening, the structural misalignment in guarantee coverage, or the absence of income verification infrastructure for informal workers. SLIK relaxation removes a barrier at the margin. It does not change the screening architecture.

Current Trajectory Without Intervention

Beyond SLIK relaxation, two other changes are already in motion. BP Tapera’s 2026 PKS (cooperation agreement) raised the informal allocation from 10% to 15% per bank. This is a step in the right direction, but it operates as a quota within each bank’s existing screening framework. If the screening framework itself concentrates on formality, a 15% informal quota means the bank selects the most formally-legible informal workers, not necessarily the most creditworthy ones.

Without further intervention, the trajectory looks like this. FLPP continues to operate at Rp 37.1 trillion for 2026, targeting 350,000 units across 43 banks. Mandiri, which disbursed 11,122 units in 2025 (4.0% of system volume), continues to screen with Dim 2-heavy criteria. **Jamkrindo’s guarantee terms remain more restrictive than current regulation**, with income ceilings of Rp 4 million (tapak) and Rp 7 million (susun) against regulatory ceilings of Rp 8.5 million to Rp 14 million, formal documentation requirements that no regulation mandates, and a one-year employment tenure floor that the bank’s own credit expert did not identify as a deal-breaker. Dim 4 remains the binding dimension across all top 20 districts, with mean scores ranging from 0.172 to 0.256, and no instrument in the current pipeline addresses it.

The formality gradient persists. Salaried workers continue to pass at 62.0% under Creditworthiness while self-employed workers pass at 34.6%, and the 10.2 percentage-point rural penalty identified in Chapter 3 continues to compound. The system is already moving, but it is moving at the margins. **The structural barriers documented in Chapters 2 through 4 remain intact under the current trajectory.** The two alternatives that follow propose different strategies for dismantling them.

5.3 Alternative A: Fix Existing Instruments

Alternative A addresses Root Cause #1 (dimensional misalignment and its consequences for bank risk aversion) and partially addresses Root Cause #3 (the quota and fiscal constraint at the margin). Both components operate through institutions that already exist, using instruments that are already in place but misaligned with the program they are meant to support.

Component 1: Guarantee Alignment

Chapter 4 established that Indonesia already has a credit guarantee fund for FLPP. Jamkrindo's subsidized housing guarantee product exists and is operational. The problem is not absence but misalignment. **Jamkrindo's published guarantee terms are more restrictive than the regulation governing the program it guarantees.** The fund sets income ceilings at Rp 4 million (tapak) and Rp 7 million (susun), while PermenPKP 5/2025 sets regulatory ceilings at Rp 8.5 million to Rp 14 million depending on zone. Jamkrindo requires formal employment documentation and a one-year tenure minimum, neither of which appears in the regulatory framework. A household that qualifies for FLPP under regulation may still be uninsurable under the guarantee, which means the bank bears the full credit risk on exactly the borrowers the program was designed to serve.

When we simulate a guarantee that absorbs the risk Dim 4 measures (Scenario S5 in Table 5.2), **Creditworthiness Bankable+ jumps from 2.652 million to 3.557 million, a gain of 0.906 million households and 15.7 percentage points.** This is the largest single-scenario impact in the analysis. The reason is structural: Dim 4 is the binding dimension, recording the lowest mean scores in roughly 90% of district strata across the top 20 districts. When the dimension that holds back the most households is absorbed by a guarantee, the gains are broad and immediate.

The question for Chapter 4 was not whether to create a guarantee fund, but whether to reconfigure the existing one so that its coverage matches the regulatory intent of the program it supports. The answer from the scenario analysis is that reconfiguration alone, an administrative revision of Jamkrindo's term sheet to match PermenPKP 5/2025 ceilings, produces the largest access gain of any single instrument tested.

Component 2: Tenor Extension

The second component is a revision to FLPP loan terms. Under current Per. BP Tapera 9/2021, FLPP loans carry a 20-year tenor. Extending this to 25 years reduces monthly installments by approximately 11.4% across all price zones. In Zone 1 (Java non-Jabodetabek and Sumatera), the installment drops from Rp 1,084,000 to Rp 961,000. In Zone 5 (Papua), it drops from Rp 1,568,000 to Rp 1,389,000.

When we extend the tenor from 20 to 25 years (Scenario S4 in Table 5.2), two effects emerge. First, within the existing 5.770 million base, lower installments improve Dim 1 (income adequacy) scores, shifting Creditworthiness Bankable+ from 2.652 million to 2.843 million, a gain of 0.192 million households. Second, tenor extension brings in 0.838 million new households who were previously below the 20-year affordability floor but sit above the 25-year floor. These are

households whose incomes can sustain a mortgage at the lower installment but not at the current one.

Combined Headline: S4 + S5

When both components are applied together (S4+S5 combined in Table 5.2), the combined eligible base expands to 6.609 million (the existing 5.770 million plus 0.838 million new entrants from the tenor extension). Within this expanded base, **Creditworthiness Bankable+ reaches 3.983 million, a total gain of 1.331 million households over the baseline.** Of this total, 3.641 million come from the existing base and 0.342 million from new entrants.

The combined Bankable+ rate is 60.3% of the expanded base, which appears lower than the S5-only rate of 61.6%. This is because the denominator grew. The absolute count, 3.983 million, is the relevant number for policymakers evaluating reach.

Dual Framing

For policymakers, Alternative A means 1.3 million additional households gaining Bankable+ status through two administrative reforms that require no new legislation and no new institutions. Guarantee alignment is a term-sheet revision at Jamkrindo. Tenor extension requires coordination between BP Tapera and Kemenkeu but operates within the existing FLPP infrastructure.

For Mandiri, the framing is different but compatible. **Guarantee alignment reduces the bank's credit risk exposure on informal borrowers**, the segment where Dim 4 scores are lowest and the bank's current screening is most restrictive. With a properly calibrated guarantee absorbing Dim 4 risk, the bank can expand its FLPP pipeline without taking on additional uninsured exposure. The Creditworthiness Bankable+ pool under S4+S5 also has stronger Dim 3 (financial track record) profiles than the current Mandiri-product Bankable+ pool, meaning the bank would be selecting from borrowers with higher rates of savings account ownership, formal credit participation, and digital financial engagement. This is not a trade-off between access and portfolio quality. Under Alternative A, they move in the same direction.

5.4 Alternative B: Build New Instruments

Alternative A fixes what already exists. Alternative B builds what is missing. It addresses Root Cause #2 (the informality verification gap) and Root Cause #3 (the quota and fiscal constraint) through two components that require new institutional infrastructure. Neither instrument is operational today, which means Alternative B cannot be evaluated with the same scenario analysis used for Alternative A. We state this explicitly and explain why.

Component 1: Digital Income Verification

Chapter 3 identified a two-sided verification problem. On one side, digital credit data already flows into SLIK and creates barriers (Section 3.2), while the system lacks the diagnostic capacity to distinguish SLIK rejections from other causes of application failure. On the other side, digital transaction data that could verify income for informal workers does not yet flow into mortgage assessment at all. The existing digital infrastructure captures credit behavior and penalizes it, but does not yet capture income behavior.

Chapter 4's India benchmark shows what a consumer-directed data sharing architecture looks like. India's Account Aggregator framework, with 252.9 million users as of December 2025, allows borrowers to share their own financial records, bank statements, tax filings, investment data, directly with a lender through a consent layer. Housing finance companies like PNB Housing and Aavas have already built mortgage products around AA-verified income, specifically targeting self-employed and informal borrowers who lack conventional payslips.

Indonesia has the technical building blocks. SNAP open banking APIs exist and are operational. However, the architecture is bank-centric, designed for institutions to pull data rather than for consumers to push it. The missing piece is the consent layer that lets a borrower authorize the sharing of their own e-wallet transaction history, utility payment patterns, or marketplace sales records as evidence of income stability. OJK's Open Finance Roadmap, expected in 2026, is the regulatory prerequisite. Without it, the EXPEND-as-income-proxy assumption that underlies this entire analysis remains an analytical convenience rather than an operational reality.

What this solves: When informal income becomes verifiable, the effective weight on employment formality in bank screening drops, not because anyone changes a formula, but because formality was always a proxy for verifiability. A self-employed worker whose monthly GoPay transaction history shows stable earnings of Rp 5 million does not need a payslip to demonstrate Dim 2 (income stability). **Digital verification does not change who is creditworthy. It changes who is visibly creditworthy.**

Component 2: Fiscal Expansion via Tapera

Chapter 4's Mexico and China benchmarks address the fiscal constraint from two directions. Mexico's INFONAVIT, funded by a 5% employer payroll contribution, has originated over 12 million mortgages and holds a portfolio of approximately USD 70 billion, representing roughly 70% of the Mexican mortgage market. It demonstrates what a dedicated housing fund can achieve at scale.

China's Housing Provident Fund offers the cautionary case: after more than three decades of operation, the HPF's formality exclusion is not a transitional problem awaiting a fix but a durable feature of the design. The fiscal instrument is the easiest to build and the most dangerous to build alone.

Indonesia's version is Tapera. PP 21/2024 sets a 3% contribution rate (2.5% employer, 0.5% worker for salaried employees; 3% for self-employed). The private-sector participation deadline is May 2027. No contributions are flowing yet. The current FLPP budget of Rp 37.1 trillion for 2026 does not include any Tapera contributions, and collection from the broader private-sector workforce has not begun.

The FLPP budget trajectory shows willingness to expand, from Rp 24.6 trillion in 2024 to Rp 41.99 trillion in revised 2025, but this expansion has relied on annual appropriations and loan repayments rather than a dedicated contribution stream. **Tapera's contribution mechanism, once operational, would provide a structural funding base independent of annual budget cycles.** However, the China precedent warns that a payroll-funded housing fund inherits the labor market's formality bias. If Tapera contributions flow primarily from formally employed workers, and if Tapera-funded mortgages are accessible primarily to contributors, the fund replicates at the fiscal level the same formality gradient this analysis documented at the screening level.

Why Alternative B Has No Scenario Numbers

The scenario analysis in Section 5.5 quantifies Alternative A's components because both operate on variables already observable in the data. Guarantee alignment adjusts a dimension weight. Tenor extension recalculates installments. Both produce deterministic shifts in bankability scores that we can measure against the existing 5.770 million base.

Alternative B's components, by definition, introduce instruments that do not yet exist and whose impact cannot be estimated from current household characteristics. We do not know what income profiles digital verification would reveal, because those profiles are not yet captured. We do not know how many additional units Tapera contributions would finance, because the contributions have not started. **Evaluation of Alternative B in the scoring matrix relies on feasibility, timing, and cost criteria rather than modeled effectiveness.** This is not a limitation of the analysis. It is a feature of the distinction between fixing existing instruments and building new ones.

5.5 Scenario Analysis

This section consolidates the scenario results introduced across Sections 5.2 and 5.3 into a single comparative table. Each scenario tests one parameter changes against the baseline, holding everything else constant. The final row combines the two Alternative A components to show their joint effect.

The baseline is the current state: 5.770 million eligible households scored under existing program terms with no policy changes. **The table reports results under the Creditworthiness (CW) scheme, the independent multi-dimensional benchmark established in Chapter 2.** Cross-scheme consistency is discussed below. Each scenario tests one parameter changes against this baseline, holding everything else constant.

Table 5.15. Scenario Analysis Results

Scenario	Label	Parameter Change	Households Scoring Creditworthy	Shift
Baseline	—	No change	2.652M (46.0%)	—
Reweight to Creditworthiness	S1	Weights only	2.652M (46.0%)	-0.837M vs Mandiri-product (-14.5pp)
Reweight to Mandiri-credit-team	S2	Weights only	3.116M (54.0%)	-0.372M vs Mandiri-product (-6.5pp)
Lower income floor	S3	Affordability threshold 30% → 33%	0.096M of 0.665M new (14.4%)	Tested, rejected
Extend tenor	S4	20yr → 25yr	2.843M (49.3%)	+0.192M vs baseline (+3.3pp)
Guarantee alignment	S5	Neutralize Dim 4	3.557M (61.6%)	+0.906M vs baseline (+15.7pp)
Combined	S4+S5	Tenor + guarantee	3.983M (60.3% of 6.609M)	+1.331M vs baseline

Note: “Creditworthy” refers to households scoring ≥ 0.65 under the Creditworthiness (CW) scheme, the independent multi-dimensional benchmark established in Chapter 2. Percentages are shares of the eligible base (5.770M unless otherwise noted).

Three findings emerge from this table.

First, guarantee alignment produces the largest single-scenario impact. When Dim 4 is neutralized, Creditworthiness Bankable+ rises by 0.906 million households and 15.7 percentage points. The reason is that Dim 4 is the binding dimension, recording the lowest mean scores in roughly 90% of district strata across the top 20 districts. When the dimension that most constrains

composite scores is absorbed by a guarantee, the gains are not concentrated in a few locations. They are broad. Every district where Dim 4 was the weakest link, which is nearly every district with a meaningful pipeline, sees improvement. This is why guarantee alignment is the centerpiece of Alternative A. It addresses the most widespread structural barrier in the data.

Second, lowering the income floor was tested and rejected. If the affordability threshold shifts from 30% to 33%, 0.665 million households just below the current income floor become newly eligible. These are households whose incomes fall slightly short of affording the current monthly installment. However, only 14.4% of them score Creditworthiness Bankable+, compared to 46.0% in the existing base. Under Mandiri-product weights, a more generous 41.2% of the near-miss group reaches Bankable+, but this reflects Mandiri-product's heavy weight on employment formality (0.50) and zero weight on risk buffers, the same screening pattern Chapter 3 identified as the problem. **Adjusting the income threshold does not fix the structural barriers that determine who qualifies under a rigorous multi-dimensional assessment.** The threshold expansion is not included as an alternative.

Third, the reweighting scenarios are diagnostic, not operational. S1 and S2 measure in the opposite direction from the other scenarios. Instead of asking "how many more households qualify if we change a policy parameter," they ask "how many fewer households would qualify if the bank screened on balanced creditworthiness instead of employment formality." The answer is 0.837 million fewer under Creditworthiness and 0.372 million fewer under Mandiri-credit-team. The concrete instruments in Alternative A, guarantee alignment and tenor extension, are what reweighting looks like when translated into policy. When a guarantee absorbs Dim 4 risk, the bank's lending decision effectively places less weight on that dimension. The scenario results confirm that this translation produces large, measurable gains.

Cross-Scheme Robustness

One feature of the scenario analysis deserves attention. The guarantee scenario (S5) produces the largest impact not only under Creditworthiness (+0.906 million) but also under Mandiri-credit-team (+0.654 million). The ranking of alternatives is stable across weighting schemes. This matters because the competing definitions of bankability are a design feature of the analysis, not a weakness. If the guarantee were the best instrument only under one set of weights, the finding would be fragile. The fact that it dominates across schemes means the conclusion does not depend on which lens the decision-maker adopts.

What the Table Does Not Show

Alternative B has no rows in Table 5.2. Digital income verification and Tapera fiscal expansion introduce instruments that do not yet exist, and their impact cannot be estimated from current household characteristics. This is the fundamental distinction between the two alternatives. Alternative A operates on variables already in the data, which is why we can model its effects. Alternative B operates on infrastructure that has not been built, which is why its evaluation in the scoring matrix that follows relies on feasibility, timing, and cost rather than modeled reach.

The geographic dimension reinforces the case for Alternative A. Because Dim 4 is binding across all top 20 districts, guarantee alignment has the broadest structural impact precisely where the pipeline is largest. The top 20 districts account for 1.353 million Creditworthiness Bankable+ households, 51.0% of the national pipeline. An instrument that lifts the binding constraint in these districts does not require geographic targeting. It works everywhere the problem is worst.

5.6 Scoring Matrix and Sequencing

Table 5.3 scores the status quo and two alternatives against the six criteria established in Section 5.1. Each cell uses a 1 to 5 scale, where 1 is weakest and 5 is strongest.

Table 5.16. Scoring Matrix (1 = weakest, 5 = strongest)

Criterion (Weight)	Status Quo		Alt A		Alt B	
	Score	Reason	Score	Reason	Score	Reason
Effectiveness (20%)	2	SLIK unblocks 111K, but base and gradient unchanged	5	+1.331M creditworthy households, largest modeled gain	3	Cannot be quantified, but addresses root causes Alt A does not reach
Efficiency (20%)	3	Minimal cost for modest reach	5	Term-sheet revision + one parameter change, 1.3M+ at near-zero cost	2	Infrastructure investment required before any household benefits
Equity (20%)	2	15% quota helps, but gradient (62.0% vs 34.6%) persists	4	Guarantee absorbs Dim 4 risk falling hardest on informal households	5	Digital verification directly addresses root of the formality gradient
Feasibility (15%)	5	Already happening, no coordination needed	4	Two institutions (Jamkrindo, BP Tapera/Kemenkeu), existing legal authority	2	OJK framework + bank integration for verification, national enrollment for Tapera
Timing (15%)	5	SLIK effective mid-2026, quota already signed	4	Guarantee immediate, tenor requires amendment but no new institutions	2	Digital verification 2026+, Tapera deadline May 2027
Cost (10%)	5	No additional expenditure	4	Modest increase in Jamkrindo liability, higher interest subsidy over loan life	2	Public investment for digital infrastructure, Tapera admin costs scale with enrollment
Weighted Total	3.40		4.40		2.85	

Note: SQ = Status Quo. Alt A = Fix Existing Instruments. Alt B = Build New Instruments. Weighted totals computed as the sum of each score multiplied by its criterion weight. Scores are the author's assessment based on scenario analysis, institutional evidence, and international benchmarks from Chapter 4.

Sequencing

The weighted totals suggest a clear sequence, and the logic is straightforward. Alternative A goes first because it scores highest and requires the least coordination. Guarantee alignment is a term-sheet revision at Jamkrindo, aligning existing coverage terms with existing regulation. Tenor extension requires BP Tapera and Kemenkeu coordination but no new legislation and no new institutions. Both can begin producing results within one budget cycle.

Alternative B follows as a medium-term investment. Digital income verification infrastructure depends on OJK's Open Finance Roadmap, which is expected in 2026 but will require bank-level system integration before it translates into changed lending decisions. Tapera fiscal expansion begins when private-sector contributions start flowing after the May 2027 deadline, but the China precedent from Chapter 4 warns that **a payroll-funded housing fund built without first fixing the screening architecture will inherit the labor market's formality bias**. This is why sequencing matters. Alt A fixes the screening instruments. Alt B then builds on a corrected foundation rather than scaling up a flawed one.

For policymakers, the sequence delivers 1.3 million additional creditworthy households in the near term (Alt A) and a structurally reformed verification and funding architecture in the medium term (Alt B). **For Mandiri**, Alt A means guarantee coverage that reduces credit risk on informal borrowers while expanding a pipeline the bank can serve within existing FLPP infrastructure, and Alt B means future access to digitally verified income data that replaces formality as a screening proxy.

Caveats

Qualitative scoring introduces subjectivity. The weights are justified by the policy problem's structure but remain debatable. The framework structures a comparison, it does not capture the full political or implementation complexity of coordinating across Indonesian housing finance institutions. Alternative B's effectiveness score is necessarily qualitative given the absence of data on instruments that do not yet exist. We present this framework as a disciplined starting point for the decision, not as a substitute for it.

Chapter 6

Conclusion

6.1 What This Analysis Found

Program 3 Juta Rumah targets three million homes per year across four segments and four delivery channels, from government-built public housing to household self-construction. This analysis examined one channel: the banking channel, where FLPP provides subsidized mortgages at 5% fixed for 20 years, and where bank credit decisions determine who gets served. FLPP's annual capacity is approximately 350,000 units. The research question was never only whether enough eligible borrowers exist. It was also how banks select among them, which segments are potentially creditworthy and where they are located, and what instruments could incentivize banks to expand lending within this channel.

Those questions matter because the segment carries real risk. Small-house mortgage lending (buildings ≤ 21 m², the closest category to FLPP housing) recorded non-performing loans of 5.23% in April 2025, nearly double the system-wide KPR average of 3.01%, with credit growth contracting at -4.8% year-on-year. Banks are retreating from exactly the segment this program needs them to enter. FLPP's subsidy design, a fixed 5% rate and 20-year tenor backed by government liquidity, functions as built-in credit enhancement that conventional small-house lending lacks. Understanding how banks screen within this subsidized channel is essential to understanding why program reach falls short of program ambition.

We began with the household evidence. Starting from 74.1 million Indonesian households, three regulatory filters produced 5.770 million program-eligible households, **a number that has not previously been estimated at this level of granularity. Every one of them passes the regulatory bankability screen.** The regulation, by design, is not the binding constraint. However, when we applied multi-dimensional creditworthiness assessment using four dimensions mapped to POJK 42/2017's 5C framework, the share of households scoring as creditworthy dropped sharply and varied depending on how dimensions were weighted: 46.0% under the Creditworthiness scheme (CW), 60.5% under Mandiri-product (MP). Under any definition, the pipeline exceeds FLPP capacity by 3.4 to 16.5 times. The constraint is downstream, in bank-level screening.

The institutional diagnosis in Chapter 3 revealed where that screening concentrates. **Mandiri loads half its effective weight on employment formality and assigns zero weight to risk buffers.** The bank's own credit expert, asked to rank the same four dimensions independently, produced weights closer to the independent creditworthiness assessment than to her own institution's product criteria. Three root causes emerged: a concentration of screening weight on employment formality, driven in part by the absence of alternative verification infrastructure; an informality verification gap where the credit bureau system (SLIK) captures harmful online lending records but lacks the diagnostic infrastructure to distinguish SLIK barriers from other causes of application failure

(Section 3.2), while positive financial behavior such as e-wallet transactions remains invisible to the screening process, and a quota and fiscal constraint where even the most conservative pipeline of 1.190 million exceeds annual disbursement capacity by 3.4 times.

Chapter 4 mapped each root cause to an international benchmark. Colombia's FNG offers credit guarantees covering up to 70% of expected loss. India's Account Aggregator framework, reaching 252.9 million users, creates the consumer-directed income verification infrastructure Indonesia lacks. Mexico's INFONAVIT, funded by a 5% employer payroll contribution, demonstrates fiscal expansion beyond annual budgets. China's Housing Provident Fund served as a cautionary case, showing that **a fiscal instrument built on formal employment inherits the labor market's exclusion pattern and locks it into the housing finance architecture**. The most immediately actionable finding was that Jamkrindo's published FLPP guarantee terms are more restrictive than current regulation, with income ceilings of Rp 4 million and Rp 7 million against regulatory ceilings of Rp 8.5 million to Rp 14 million.

Chapter 5 evaluated two alternatives against six weighted criteria. Alternative A, fixing existing instruments through Jamkrindo guarantee alignment and tenor extension, scored highest at 4.40 out of 5.00. Alternative B, building new instruments through digital income verification and Tapera fiscal expansion, scored 2.85, reflecting higher implementation complexity and longer time horizons. Under the combined scenario, **the number of households scoring as creditworthy rises from 2.652 million to 3.983 million, an increase of 1.331 million**. The sequencing follows institutional logic: the status quo is already moving (SLIK relaxation for small debts, informal worker allocation raised to 15%), Alternative A requires coordination among existing institutions in the near term, and Alternative B requires new infrastructure over the medium term. The contribution is not prescribing a scoring model. It is making the current selection mechanism visible and its distributional consequences measurable, so that the choice belongs to the institution with full information rather than embedded assumptions.

6.2 Limitations

This analysis rests on choices and constraints that bound how far its findings can travel. We name them here not to qualify the results into irrelevance, but because honest scoping is what separates a usable diagnostic from an overreaching one.

- 1. Expenditure as income proxy.** The entire income adequacy dimension (Dim 1) uses household expenditure from SUSENAS, not verified income. Expenditure measures what households spend, not what banks can confirm a borrower earns. A household spending Rp 6 million per month might earn more through informal channels, draw down savings, or receive remittances. This means our creditworthiness estimates are upper bounds: they assume the income verification problem is already solved. This connects directly to Alternative B's digital verification component, which is not an add-on but a prerequisite for translating these numbers into lending decisions.

- 2. No credit bureau data.** We could not access SLIK (Indonesia's credit information system) or its successor IDEB at the household level. Dimension 3 (financial track record) uses savings account ownership and credit participation as proxies for actual repayment behavior. A household that has never missed a payment and one that has never been tested score identically.
- 3. Binary asset variables.** SUSENAS records asset ownership as yes or no, not asset value. A motorcycle worth Rp 2 million scores the same as one worth Rp 20 million. This compresses variation in Dimension 4 (risk buffers) and understates inequality within tiers.
- 4. Tapera undercount.** The single-person income rule in PermenPKP 5/2025 Pasal 5(6) means our household-level income filter is stricter than an individual-level application would be. The 5.770 million figure is a conservative lower bound of the true eligible population.
- 5. Single expert interview.** The Mandiri-credit-team (MCT) scheme rests on one officer, one bank, one interview. MCT is triangulation evidence showing that expert judgment diverges from product-page criteria, not a representative sample of how Indonesian credit professionals think.
- 6. No gig economy capture.** SUSENAS employment categories (variable R706) do not distinguish app-based gig workers from traditional informal self-employment. A ride-hailing driver with steady digital transaction records and a seasonal agricultural laborer appear in the same category.
- 7. Demand-side only.** This analysis does not examine housing supply: no assessment of unfit-for-habitation housing stock (RTLH), developer construction capacity, or land availability. The 5.770 million figure represents potential mortgage demand through the banking channel, not confirmed housing supply to absorb it.
- 8. No loan performance validation.** We cannot validate creditworthiness scores against actual mortgage default outcomes. The framework is predictive in structure but has not been tested against realized portfolio performance. Without this validation, we cannot claim that higher-scoring households would in fact repay at higher rates.
- 9. Credit bureau online lending data not verified at household level.** BP Tapera initially reported 111,258 FLPP applications unprocessed by banks, attributing this to SLIK barriers from small online lending debts. OJK verification subsequently found only 3,299 explicitly SLIK-rejected, with the majority of unprocessed applications stemming from other causes (Pusparisa & Nugraha, 2025). We could not match either the original or corrected figures to individual households in our SUSENAS-based dataset. The SLIK relaxation policy (excluding debts below Rp 1 million, effective 2026) is incorporated into Chapter 5's status quo assessment but not into the household-level scoring.
- 10. Cross-sectional snapshot.** SUSENAS 2025 March wave captures one moment. We cannot track whether households move between tiers over time, whether near-creditworthy

households eventually become creditworthy, or how macroeconomic shifts alter the distribution.

- 11. Dimension 4 circularity.** The largest component of Dimension 4 (risk buffers) is land ownership and certification, weighted at 0.30 within the dimension. However, FLPP-eligible households are by definition non-homeowners. The dimension penalizes households for the very condition that makes them program-eligible. We retain Dimension 4 because it measures real financial resilience, but this structural floor explains why Dim 4 is the binding dimension in every top district and why the guarantee scenario (S5) is partly resolving a measurement artifact alongside a genuine risk gap.

6.3 Contributions

This paper adds five things to the conversation on housing finance access in Indonesia.

First, it provides the **first household-level creditworthiness mapping of the FLPP-eligible population** using SUSENAS microdata. Before this analysis, no publicly available estimate had quantified how many of Indonesia’s program-eligible households could plausibly pass a multi-dimensional credit assessment, or where those households are concentrated geographically. The 5.770 million eligible figure and its downstream tier distributions give both government and banks a demand-side baseline that did not previously exist.

Second, it introduces a **four-perspective methodology with Stillwell rank-sum weighting** that makes implicit screening assumptions visible and comparable. Rather than asserting one correct definition of creditworthiness, the framework places four competing definitions side by side, each grounded in a different evaluative logic, and lets the reader see how the same population shifts from 46.0% to 60.5% creditworthy depending on which weights are applied. The swing is the point: it reveals that “creditworthy” is a policy construct, not a natural category.

Third, the **sub-component decomposition** shows that screening concentrates on employment formality rather than distributing across creditworthiness dimensions. This is not a volume finding (Mandiri passes more households than the independent assessment, not fewer) but a composition finding. The bank selects for formal employment while functionally ignoring financial track records and risk buffers. Making that pattern visible is the prerequisite for any institutional conversation about changing it.

Fourth, **district-level binding dimension identification** confirms that asset poverty (Dimension 4) is the structural barrier across all top 20 districts, accounting for 51.0% of the creditworthy pipeline. Variation within these districts is driven by financial track records (Dimension 3), not by risk buffers. This tells policymakers where to direct guarantee instruments and tells banks where the largest untapped pools sit.

Fifth, the **quantified scenario analysis** demonstrates that fixing existing instruments, specifically aligning Jamkrindo’s guarantee terms with current regulation and extending mortgage tenor from 20

to 25 years, produces the largest measurable impact: an increase of 1.331 million households scoring as creditworthy. Building new instruments scores lower on feasibility and timing but remains the necessary medium-term path. The sequencing recommendation is grounded in institutional readiness, not analytical preference.

We frame these as contributions to the conversation, not conclusions to the debate. The paper diagnoses a selection pattern and quantifies its consequences. It does not prescribe a scoring model.

6.4 Looking Ahead

Five areas of future research follow directly from the limitations we have named.

First, **credit bureau integration**. If researchers gain access to SLIK or IDEB data at the household level, Dimension 3 (financial track record) moves from proxy-based estimation to observed repayment behavior. This would transform the creditworthiness framework from a predictive structure into a validated one, and it would allow direct measurement of why the 111,258 applications documented in Section 3.2 went unprocessed, distinguishing between SLIK barriers, documentation gaps, demand-side issues, and bank follow-up failures, and determining whether confirmed SLIK-rejected applicants are genuinely higher-risk or simply penalized by a system that records harm but not reliability.

Second, **panel data**. A longitudinal version of this analysis using successive SUSENAS waves would track whether households move between creditworthiness tiers over time, whether near-creditworthy households respond to macroeconomic improvements, and whether the formality gradient narrows or widens as labor markets evolve. The cross-sectional snapshot presented here cannot answer those questions. Future research could also integrate SAKERNAS (Survei Angkatan Kerja Nasional, the National Labor Force Survey) district-level labor market indicators to capture local employment conditions as a contextual dimension.

Third, **supply-side analysis**. This paper maps mortgage demand through the banking channel. The corresponding supply-side question, whether developers can build, whether land is available and titled, and where unfit-for-habitation housing (RTLH) concentrates, remains unaddressed. Connecting demand-side creditworthiness maps with supply-side capacity data would produce a more complete picture of where program investment is most likely to translate into actual housing.

Fourth, **pilot evaluation**. If Mandiri or another FLPP-participating bank adjusts its screening criteria, whether by accepting e-wallet transaction histories, relaxing tenure requirements for contract workers, or adopting the guarantee alignment recommended in Alternative A, the natural next step is measuring portfolio outcomes. Does a broader screening lens produce higher default rates, or does FLPP's subsidy structure absorb the incremental risk as the program design intended?

Fifth, **consumer-directed income verification feasibility**. India's Account Aggregator framework offers a model, but Indonesia's regulatory architecture, institutional capacity, and digital finance

landscape are different. A dedicated feasibility study would assess what a consumer-directed income verification infrastructure looks like within Indonesia's existing open banking framework (SNAP) and what regulatory changes would be required to move from bank-centric data access to borrower-controlled data sharing.

We close with the thesis restated plainly. This paper does not tell banks how to score borrowers. It shows how borrowers are currently being scored, what that scoring selects for, and what it excludes. **The screening mechanism is now visible. Its distributional consequences are now measurable.** The path forward depends on coordinated action across regulators, guarantee institutions, and banks to build the verification and risk-sharing infrastructure that would allow screening to distribute across multiple dimensions.

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