Post-Class Summary: CBDC Business Models

Key Frameworks

Business Model Canvas for CBDC

The Business Model Canvas decomposes any venture into nine interlocking elements — value proposition, customer segments, channels, revenue streams, key resources, key activities, key partners, cost structure, and customer relationships. For CBDC programmes, the canvas reveals a structural twist that does not appear in commercial fintechs: the issuer (the central bank) holds exactly one block — Key Resources, the digital claim itself — while the PSP layer competes for every other block. Channels, customer relationships, and revenue streams all sit with licensed intermediaries; the issuer is a wholesale supplier of the most boring input imaginable, and the BM contest happens entirely in the middle tier.

Platform Economics for CBDC

Many CBDC programmes operate as multi-sided platforms connecting two or more participant groups — issuers and PSPs at the wholesale layer (mBridge), or PSPs and end-users at the retail layer (e-CNY, Sand Dollar, Drex). These platforms exhibit cross-side network effects: each additional central bank that joins mBridge expands the available corridor pairs for every commercial bank already on the network; each additional PSP that joins a retail CBDC enlarges the addressable user base for every other PSP. The central strategic challenge is the chicken-and-egg problem, almost always solved by attracting the supply side first — PSPs and participating banks — because their onboarding can be achieved by mandate or negotiation, while end-user adoption must be earned one wallet at a time.

Unbundling–Rebundling Cycle for CBDC

Christensen's disruption framework explains how CBDC wallets enter and grow. The wallet enters narrow with a single function — digital cash, transit payment, or a wholesale settlement claim — and earns user habit through a wedge service. Once trust accumulates, programmable rails for subsidy, payroll, conditional disbursement, and merchant integration are progressively rebundled into the same wallet. The endpoint is a programmable distribution platform that can carry any state-issued or merchant-issued payment instruction. The cycle echoes the commercial fintech arc, but the rebundling reaches further because programmability is itself a state policy instrument.

Value Chain Deconstruction for CBDC

Evans and Wurster argued that information-rich value chains are vulnerable to deconstruction when digital alternatives reduce the cost of coordinating across firm boundaries. The CBDC value chain deconstructs vertically rather than horizontally: three tiers — Issuer at the top, PSP intermediaries in the middle, end-users at the wide base of a stratified stack pyramid. Only the middle tier carries a business model; the issuer is a public-good cost centre and the user tier is the demand base. The wider the user base, the more rent the middle tier can extract per unit of distribution it provides.

Regulatory Arbitrage for CBDC

Some CBDC programmes have introduced lighter regulatory regimes for new PSP tiers — the Sand Dollar's PSP carve-out, e-money licence equivalents in other contexts. This arbitrage is structurally temporary: the regulatory perimeter eventually widens to include the new tier. The strategic question for entrants is whether early scale can be converted into a durable compliance moat — building regulatory capability that itself becomes a barrier to later entrants. Programmes where the entrant invests early in compliance infrastructure typically convert positive arbitrage into a permanent advantage; programmes where the entrant simply rides the gap lose the moat the moment the gap closes.

Company Cases Summary

Programme	Value Creation Mechanism	Key Framework	What Makes It Different
mBridge	Cross-border wholesale settlement on a shared central-bank ledger; corridor pairs accessed without correspondent-bank chains	Platform Economics	Multi-issuer platform with cross-side network effects between participating central banks and commercial-bank counterparties
e-CNY	Retail digital-cash wallet that progressively rebundled merchant tools, transit, payroll, and programmable subsidy rails	Unbundling–Rebundling	Public-good wallet that ended up rebundling more services than a commercial wallet ever could because programmability is a state instrument
Sand Dollar	Retail CBDC distributed through a PSP-tier carve-out enabling onboarding without full commercial-banking licences	Regulatory Arbitrage → Compliance Moat	Lighter PSP-tier licence converts to a moat only for entrants that build compliance capability before the perimeter widens
Drex	Tokenised-asset and retail-adjacent settlement combining incumbent banks and new entrants in the same PSP layer	Value Chain Deconstruction	Designed with explicit awareness that the PSP tier is the contested rent layer; both incumbents and entrants compete for the middle of the pyramid
Helvetia	Wholesale interbank settlement on a tokenised central-bank-money rail in a deeply banked economy	Business Model Canvas	Wholesale-only design where the BM question is settlement-cost reduction, not retail rent contest — a different canvas entirely

The Five-Test Framework

Use these five tests to evaluate any CBDC programme's strategic position:

1. **Friction test.** Identify the largest friction the CBDC actually removes — reach, cost, settlement delay, programmability gap.
   Application: mBridge removes correspondent-bank reconciliation friction; if cross-border settlement were already instant and free, mBridge would have no remaining commercial role.

2. **Platform test.** Determine whether the CBDC platform connects two or more sides of a market and benefits from cross-side network effects.
   Application: mBridge connects participating central banks on one side and commercial-bank counterparties on the other; each new central bank expands the corridor inventory available to every commercial bank, and vice versa.

3. **Rebundling test.** Assess whether the CBDC has begun — or is likely to begin — adding services beyond its original wedge function.
   Application: e-CNY launched as a digital cash wallet, then added merchant tools, transit, payroll integration, and programmable subsidy rails — a textbook rebundling arc.

4. **Infrastructure test.** Ask whether the CBDC is filling a vacuum (no existing instant-payments rail) or displacing an incumbent rail that already works.

Application: Sand Dollar fills a retail-account vacuum in island geographies where branch coverage is sparse; Helvetia displaces an existing wholesale rail in a deeply banked economy.

5. **Arbitrage test.** Evaluate whether the CBDC's PSP-tier advantage stems from a regulatory carve-out and, if so, whether that carve-out is widening or narrowing.
Application: Sand Dollar's lighter PSP-tier licence creates a real arbitrage window; entrants who invest in compliance capability early convert it into a moat, those who ride it lose it.

Connections to Other Topics

The frameworks above connect directly to several other course themes. The two-tier intermediation logic links to the payment-systems material in Lesson One, where the correspondent-bank chain that mBridge attacks is described in institutional detail — including settlement delay, reconciliation cost, and the politics of cross-border standards. The PSP-tier rent contest connects to the neobank business-model lecture in Lesson Two, where private-sector wallets compete for the same retail customer interface that a retail CBDC would distribute through. The regulatory-arbitrage angle links to Lesson Four on RegTech and compliance, where licence-tier carve-outs and compliance-as-moat dynamics determine which entrants survive the perimeter-widening that always eventually arrives.

