Post-Class Summary: Composability Business Models

Key Frameworks

Business Model Canvas for a Composable Primitive

The Business Model Canvas, applied to a forkable on-chain primitive, exposes a structural inversion: the most valuable blocks are not the ones the protocol controls in code. They are Key Resources (deposited liquidity, integration relationships, oracle adapters) and the Value Proposition of being the default integration target – the address every upstream protocol hard-codes. Channels are not consumer marketing campaigns but the integrator layer of aggregators, wallets and structured products that ride on top. Revenue Streams accrue as fee splits with integrators and as governance-token value tied to protocol-owned activity. The blocks the contract source code defines (Key Activities, Cost Structure) are necessary but cannot form a moat.

Platform Economics for Composability

Composable primitives that survive forks are structurally three-sided platforms, not two. A pure pool (depositors and borrowers, or buyers and sellers) can be drained by a token incentive offered to one side. A three-sided platform with depositors, borrowers and integrators creates cross-side network effects on three axes simultaneously: deeper deposits attract integrators, more integrators route more borrows, more borrows raise the deposit yield. The cold-start solution is to bootstrap the depositor side first via governance-token incentives, knowing the other two sides will follow the deepest pool.

Unbundling-Rebundling in a Composable Stack

Christensen's disruption framework explains how composable protocols enter and consolidate. They unbundle a single primitive from a monolithic incumbent (or from a generic alternative) and ship it better. Once liquidity is captured, they rebundle by layering adjacent products on top of the original wedge – curated vaults, structured products, branded integrations, partner-chain deployments. Each new product becomes a non-portable switching cost on top of the original liquidity moat. The cycle repeats: today's rebundled primitive becomes tomorrow's fork target, and the cycle starts again one layer up.

Composability Value Chain Deconstruction

Evans and Wurster argued that information-rich value chains are vulnerable to deconstruction. A composable on-chain stack has six contestable links: Acquisition, Onboarding, Manufacturing, Distribution, Servicing, Risk. The Manufacturing link – the primitive that produces a financial output – captures the deepest fee because every higher link must route through it. Distribution-layer protocols such as routers and aggregators are vulnerable to fee-switch politics from below. Servicing protocols (oracle networks, keepers, liquidation bots) and Risk protocols (audit, insurance, governance hardening) form smaller but more defensible niches.

Composability Arbitrage and the Moat Question

Composable BMs face an arbitrage analogue to regulatory arbitrage but with a shorter half-life. A protocol that consumes a host primitive (Pendle on Curve, an aggregator on Aave) earns a niche that lasts only until the host flips a fee-switch, ships its own version, or fork-captures the consumer in a governance vote. The strategic question is whether the consumer can lock in fee-share agreements, accumulate governance positions in the host, or rebundle into independent product lines before the host arbitrage closes. The best composable consumers convert their dependency into either an integration-revenue share or a multi-host product portfolio.

Company Cases Summary

Company	Value Creation Mechanism	Key Framework	What Makes It Different
Aave	Pooled-lending primitive that serves as default integration target for the broader stack	Platform Economics (three-sided)	Cross-side network effects across depositors, borrowers and integrators
Curve	Specialised invariant for like-priced swaps; captures deep liquidity that yield routers depend on	Value Chain Deconstruction	Owns the Manufacturing link; routers above pay it to consume the invariant
Yearn	Yield-routing wedge layered into curated, synthetic, levered and partner vaults	Unbundling-Rebundling	Each new vault adds a non-portable switching cost on top of the original wedge
Pendle	Yield-stripping protocol splitting principal and yield tokens that trade separately on top of host primitives	Composability Arbitrage	Fastest-closing arbitrage in the stack; durability depends on integration revenue-share lockups
EigenLayer	Restaking primitive that recycles base-layer stake to secure additional services	Infrastructure-Sensitive BM	Earns only on a mature host stack with deep stake and an existing integrator layer

The Five-Test Framework

Use these five tests to evaluate any composable primitive's strategic position:

1. **Friction test.** Identify the single largest composability friction the primitive removes for upstream protocols.
   Application: Curve removes generic-AMM slippage on like-priced asset pairs; if a generic AMM matched its invariant on those pairs, would Curve still have a reason to be the default route?

2. **Platform test.** Determine whether the primitive sustains three sides – depositors, borrowers and integrators – with cross-side network effects on all three axes.
   Application: Aave sustains a depositor-borrower-integrator triangle; the integrator side is the side a fork can never replicate by token incentives alone.

3. **Rebundling test.** Assess whether the primitive has begun – or is likely to begin – adding adjacent products on top of its original wedge.
   Application: Yearn started as a single yield-router and now ships a storefront of curated and synthetic vaults; each vault layered on top adds one more reason a depositor will not switch.

4. **Infrastructure test.** Ask whether the host stack is mature enough to provide the integrator layer the primitive needs to plug into.
   Application: EigenLayer's restaking primitive earns on a mature host stack with deep stake, oracle providers and slashing standards; on a greenfield chain it has nothing to consume.

5. **Arbitrage test.** Evaluate whether the host primitive can ship a competing version, flip a fee-switch, or fork the consumer in a governance vote.
   Application: Pendle's yield-stripping niche is durable only to the extent it has locked in fee-share agreements and accumulated governance positions before the host primitives ship their own splits.

Connections to Other Topics

The composability BM lens connects directly to several other course themes. The smart-contract-level lens covered in the smart-contracts material focuses on the cost of immutability and the audit market that grew up around it; the composability lens here scales that question up one layer to ask where value accrues across a stack of audited primitives. The DeFi material in the emerging-topics lesson takes the opposite end-user perspective, asking what market structure looks like without intermediaries; this lecture isolates the structural question of how value flows between intermediating primitives. Finally, the tokenization material covers wrap-fee economics on top of off-chain assets, which is the exact mirror of the integration-fee economics covered here – both are layered fee structures, but tokenization's layers wrap an off-chain reality while composability's layers wrap each other.

