

Session 11:
Engaging External Fund Managers

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Engaging External Fund Managers

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BNP PARIBAS
ASSET MANAGEMENT

Why Engage External Managers?

INVESTMENT EXPERTISE

Exposure to a broad range of portfolio management services

- Diversification into new investment areas or approaches
- Total or relative rate of return management
- Single or multi-currency portfolio management
- Benchmark and guideline advice
- Risk measurement and management

OPERATIONAL NEEDS

Operational needs are often as important as the investment services provided

- Systems & technology transfer
- Staff training
- Incorporation of best practices
- Technology know-how and transfer
- Performance attribution
- Compliance monitoring and procedures
- Back / middle office training
- Customized operational and reporting procedures
- Latest technology advancements

The Roles of External versus Internal Managers

Role of Internal Reserve Management Team

- Manage the liquidity, core reserves

Role of External Managers

- Benchmark internal team
- Manage sectors in which expertise not yet developed internally
- Technology and knowledge transfer – capacity building

Designing an External Manager Program

- Select a group of managers with specific or complementary skills
- Build internal knowledge and confidence in externalization program, based on clear objectives

Key Objectives in Engaging External Managers

REAL-TIME BENCHMARK

Provide a real-time external benchmark for the internal portfolio management team

CAPACITY BUILDING

Access to training, capacity building on asset classes or management techniques that are new to the team

DIVERSIFICATION

Broad diversification from an investment perspective

Widen the investment universe of the reserves portfolio and provide access to a more diverse source of market intelligence

RETURN POTENTIAL

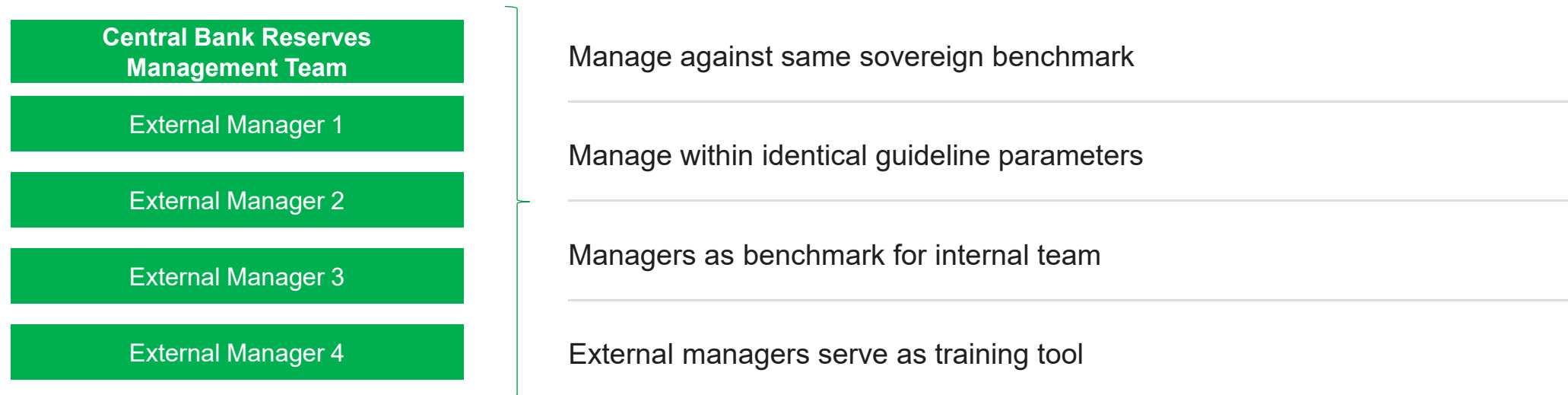
Additional sources of relative performance to raise the return potential of reserve portfolio

Defining key objectives will determine the optimal program structure

Generalist Structure

GENERALIST / PARALLEL MANAGEMENT

- Parallel management: external managers + internal team
- External & internal managers have same benchmark and guidelines
- Objective: Train and benchmark internal team



Broadening the Guidelines vs Sovereign Benchmark

GENERALIST (PARALLEL) MANAGEMENT ACROSS EXTERNAL MANAGERS: SOVEREIGN BENCHMARK

- Parallel management for External Managers
- External / Internal Managers have the same benchmark; **External Managers have broader guidelines**
- Objective: Introduce new sectors to the reserves and build expertise

Central Bank Reserves
Management Team

External Manager 1

External Manager 2

External Manager 3

External Manager 4

Manage against same sovereign benchmark

External Managers have different guideline parameters

External managers serve as training tool

Structure introduces new sectors to the reserves

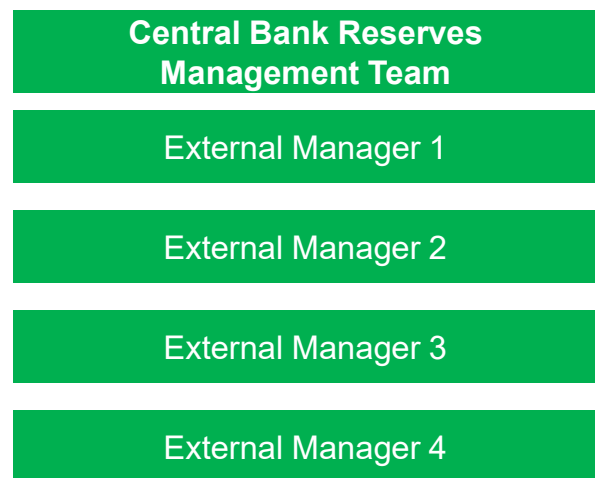
BROADER GUIDELINES FOR EXTERNAL MANAGERS

→ **Guidelines for the External Manager permit opportunistic, off-benchmark allocations to non-government sectors**

Giving External Managers Aggregate Benchmarks

GENERALIST (PARALLEL) MANAGEMENT ACROSS EXTERNAL MANAGERS: AGGREGATE BENCHMARK

- Parallel management among External Managers only
- **External / Internal Managers have different benchmarks; External managers have broader guidelines**
- Objective: Introduce new sectors to the reserves and train internal team



Different benchmarks — Internal: Government; External: Aggregate

Manage with different guideline parameters

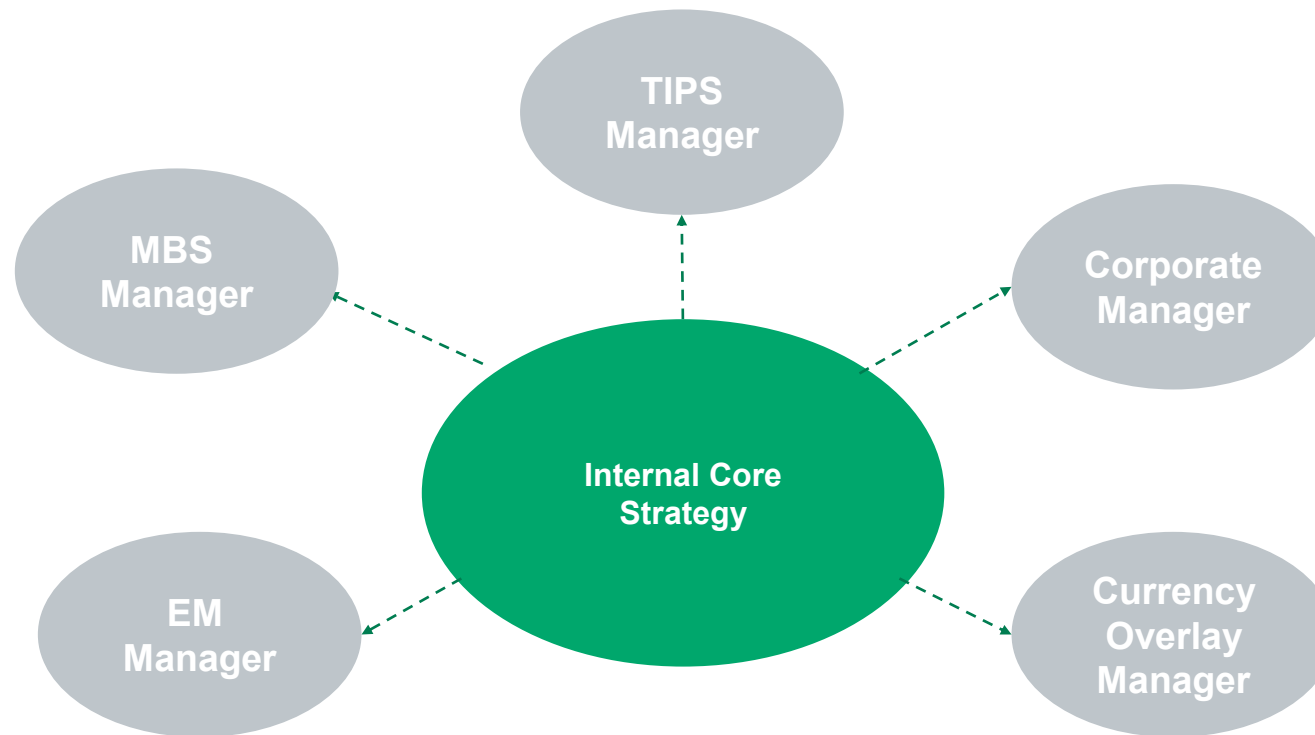
External managers serve as training tool

Structure introduces new sectors to the reserves

Using Specialist Managers – Fixed Income Example

SPECIALIST: CORE – SATELLITE STRUCTURE

- All managers have different benchmarks
- All managers have different guidelines
- Objective: introduce new sectors to the reserves, build capacity



Central Bank Key Investment Themes & External Management



Central Banks

Search for yield continues in Fixed Income and in some cases into Equities

Partnering with an external manager can facilitate key objectives



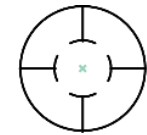
The role of Fixed Income

- Benchmark selection
- Incorporating new tools such as derivatives
- Extending duration
- Credit quality expansion



Allocation to Equities

- Adding volatility
- Passive: Global or regional
- Gateway to active



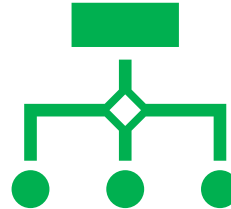
Other investments are being considered

- Thematic strategies
- ETF and Index investing
- Less liquid strategies

Key Criteria of a Successful External Manager Program



Clarity of Objectives: alpha, capacity building, operational needs



Clear role definitions & expectations: review cycle, measurement metrics



Open dialogue: needs evolve over time

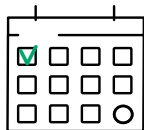
Customized Fixed Income mandates for our Central Bank clients – Fixed Income

Inception	Benchmark
01/01/75	US 1 Year Treasury Bill
10/01/84	Duration Adjusted US Treasury Index
09/01/89	65% JPM 1-5 year USD + 35% BIS overnight call rate
02/07/96	Custom Weighted JPM GBI
10/15/96	70% 3 Month T-Bill, 30% 2 Year T-Note
08/02/99	50% JP GGBI US + 40% JP GGBI EUR + 10% BARCAP US TIP
08/05/99	JPM GBI Hedged, 1 Year Governments
06/05/00	Barclays Mortgage Index
03/01/01	Custom Blend of US Treasuries, Agencies, Reverse Repos and Time Deposits
04/09/01	JPM GGBI with 15% JPY cap, 100% USD Hedged
08/17/01	Barclays Global Agg G6, A3/A-
01/07/02	Custom Weighted WGBI, 60% Hedged
04/02/02	ML Global Government Bond Index 1-3 ex-Japan 100% USD Hedged
06/20/03	US LIBOR 50% Hedged
10/31/03	JPM Government Index Broad, 100% USD Hedged
11/10/03	ML 1-3 Index Customized Weights
12/31/04	Currency Overlay
12/01/05	JPM GGBI 1-3 year with Fixed Weights: 75% USD, 20% German, 5% GBP
01/22/07	80% ML Gbl Gvt 1-10 Year; 20% ML Mtg GNMA Masters 100% USD Hedged
01/30/07	ML Global Governments, Inflation-Linked
03/19/09	ML US Treasuries, Inflation-Linked
11/01/10	Customized ML Government Bill Index
04/27/11	Barclays Capital World Govt Inflation-Linked Index ex-JP 100% USD Hedged
05/02/11	3-Month EURIBOR
08/05/11	ML Global Governments, Inflation-Linked

Inception	Benchmark
02/01/12	JPM GBI-EM Global Diversified
02/23/12	ML Global Government Bonds, G7, 1-10 Years, 100% USD Hedged
09/29/12	Customized HSBC Asian Local Currency Bond Index
10/12/12	Customized Barclays Global Inflation-Linked Unhedged, 1-30 years
12/03/12	Barclays Capital US MBS Fixed Rate Index
03/01/13	25% JPM GBI US 1-3 Year + 75% Barclays Inflation-Linked US Govt
09/25/13	ML Agency-Guaranteed MBS Master
04/01/14	Barclays Capital US MBS Fixed Average Life 1-5 Years
11/03/14	Customized Barclays Enhanced Inflation-Linked Bonds Index
04/01/15	Citigroup BIG Mortgage Index
03/31/16	1-3 Year Merrill Lynch Treasury Index
06/30/16	Citigroup BIG Mortgage Index
03/01/17	3 month LIBOR +100bps
04/04/18	ML Customized Global Government Bond index, 0-3 years
10/16/18	Bloomberg Barclays US MBS Index
10/31/19	Bloomberg Barclays US MBS Index
10/31/19	60% Bberg Barclays US MBS, 20% Bberg Barclays EM, 10% Bberg Barclays Customized US Corp, 10% Bberg Barclays US 1-3 Month Treasury Bill
11/21/19	Barclays US Government Inflation-Linked Bond Index, 1-10 Years
12/13/19	50% ICE BofAML 1-3 Year UST Index, 50% Bberg Barclays US MBS Index
01/09/20	Bloomberg Barclays MBS fixed Rate Index
06/30/20	70% ICE BofAML 1-3 Year UST Index, 30% 1-3 Year AAA Foreign Gov & Supra Index
11/02/21	Custom weighted Barclays Treasury & Inflation Short Duration
09/28/22	ICE BofAML 0 – 3 year UST Index
07/31/25	ML Customized Global Government Bond Index, 1-3 years
06/05/26	ICE BofA US Mortgage-Backed Securities Index
07/22/26	Bloomberg US Mortgage Backed Securities (MBS) Index

Source: BNP Paribas Asset Management as of July 31, 2026

Long-standing relationships & expertise with Official Institutions



50+ years experience

Managing assets for Official Institutions



Top 3 Asset Manager¹

of Central Bank reserves, with a large and diverse global client base



Extensive knowledge-sharing experience

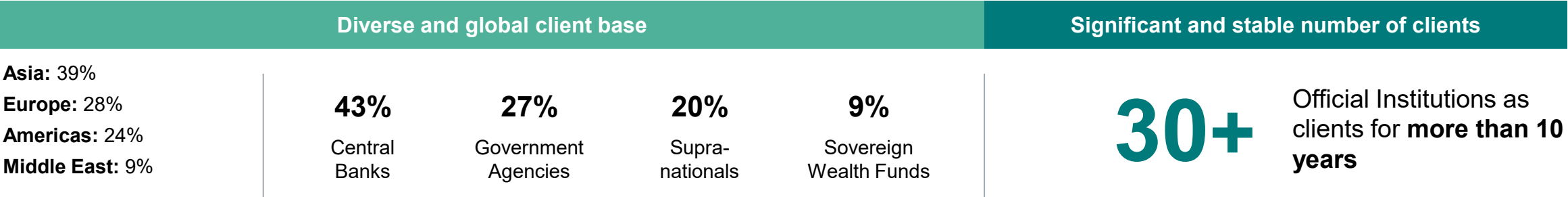
Offering a wide variety of dedicated and bespoke training for Official Institutions for almost 20 years



Recognized as a leader in reserve management

By Central Banking, for ESG services (2023) Asset Manager of the year (2021 & 2022), Innovation (2019) & Reserve Management (2018)

\$91bn in OI AUM across a variety of asset classes & strategies



Source: BNPP AM as of 30 June 2026
1: Pensions & Investments, data as of June 2026

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