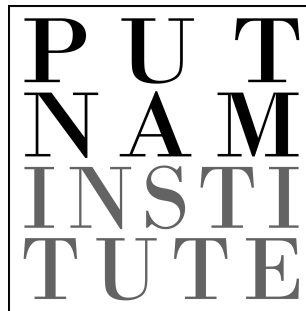


PUTNAM INVESTMENTS



TRANSACTION COSTS AT PUTNAM

July 2002

SUMMARY

Putnam Investments has committed significant resources to creating and maintaining trading systems designed to minimise the cost of executing securities transactions for our clients.

Putnam strives to achieve best execution because it plays a key role in achieving our overarching goal: to deliver superior long-term performance to our clients.

Leveraging our scale and influence as a leading investment manager, we tap all available sources of market liquidity and exploit the full range of trading platforms and strategies available in today's capital markets to drive down transaction costs.

These efforts have been successful as both external firms and internal results show us having lower transaction costs than the market.

This paper outlines the key aspects of Putnam's trading processes and strategies. An attached Appendix details the firm's stance on "soft" commission payments to full-service brokers.