**🚀 Features for the Real-Time Financial Dashboard**

**1. Core Features (MVP)**

✅ **User Authentication & RBAC (Role-Based Access Control)**

* Login/Logout with JWT or OAuth2
* Roles: *Analyst, Trader, Manager, Admin*
* Different access levels (e.g., only Admin can view audit logs)

✅ **Real-Time Data Streaming**

* Live stock prices from TSX API
* Real-time transaction volumes from DB
* WebSocket/Django Channels integration

✅ **Dashboard KPIs**

* Cards showing KPIs like:
  + Daily Transaction Volume
  + Active Users
  + Current Stock Index
  + P&L (Profit & Loss)

✅ **Charts & Visualizations**

* Line charts (time-series stock prices)
* Bar charts (transaction breakdown by region)
* Pie charts (customer portfolio allocation)
* Heatmaps (fraud alerts by region/time)

✅ **Alerts & Notifications**

* Rule-based alerts (e.g., if transaction > $1M → flag alert)
* Real-time WebSocket push notifications
* Email/SMS alerts (via AWS SNS or Twilio)

**2. Advanced Features (Next Phase)**

⚡ **Custom Filters & Drilldowns**

* Filter data by date, region, or business unit
* Drill into transactions → see detailed records

⚡ **Historical Data Analysis**

* Query past datasets from MySQL/S3
* Compare today’s data vs. last week/month

⚡ **Audit & Logging**

* Every action logged into DynamoDB
* Admins can review activity logs

⚡ **Background Jobs**

* Celery + Redis for periodic tasks (e.g., nightly summary report)
* Data cleanup jobs

⚡ **Export & Reports**

* Export charts/tables as PDF/Excel
* Automated daily/weekly email reports

**3. Enterprise Features (Scalability, Security, DevOps)**

🔐 **Security Enhancements**

* Integration with Scotiabank IAM / SSO
* Encrypted connections (HTTPS, WAF, TLS)

☁️ **Cloud & DevOps**

* Docker + Kubernetes for containerization
* AWS Lambda for serverless jobs
* AWS CloudWatch for monitoring

⚡ **High Availability & Performance**

* Caching with Redis
* Load balancing with AWS ALB
* Auto-scaling on traffic spikes

📊 **Advanced Analytics**

* Predictive insights using ML models (fraud detection, risk scoring)
* Integration with Pandas/NumPy for analytics

👉 So, in short:

* **MVP:** Auth + Real-time KPIs + Charts + Alerts
* **Advanced:** Filters, Historical Data, Audit, Export Reports
* **Enterprise:** Security, Cloud/DevOps, ML-based Analytics