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**United States Military Academy  
Department of Systems Engineering**

**ATOMM:  
Army Transformation Officer  
Management Model**

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# Agenda

- Problem
- Background
- ATOMM
- ATOMM Analysis
- Future Work
- Conclusions



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# Problem

Develop an officer strength management tool for the United States Army that will provide depth and insight to analysts and policy makers in comparing personnel strategy alternatives.



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# Background

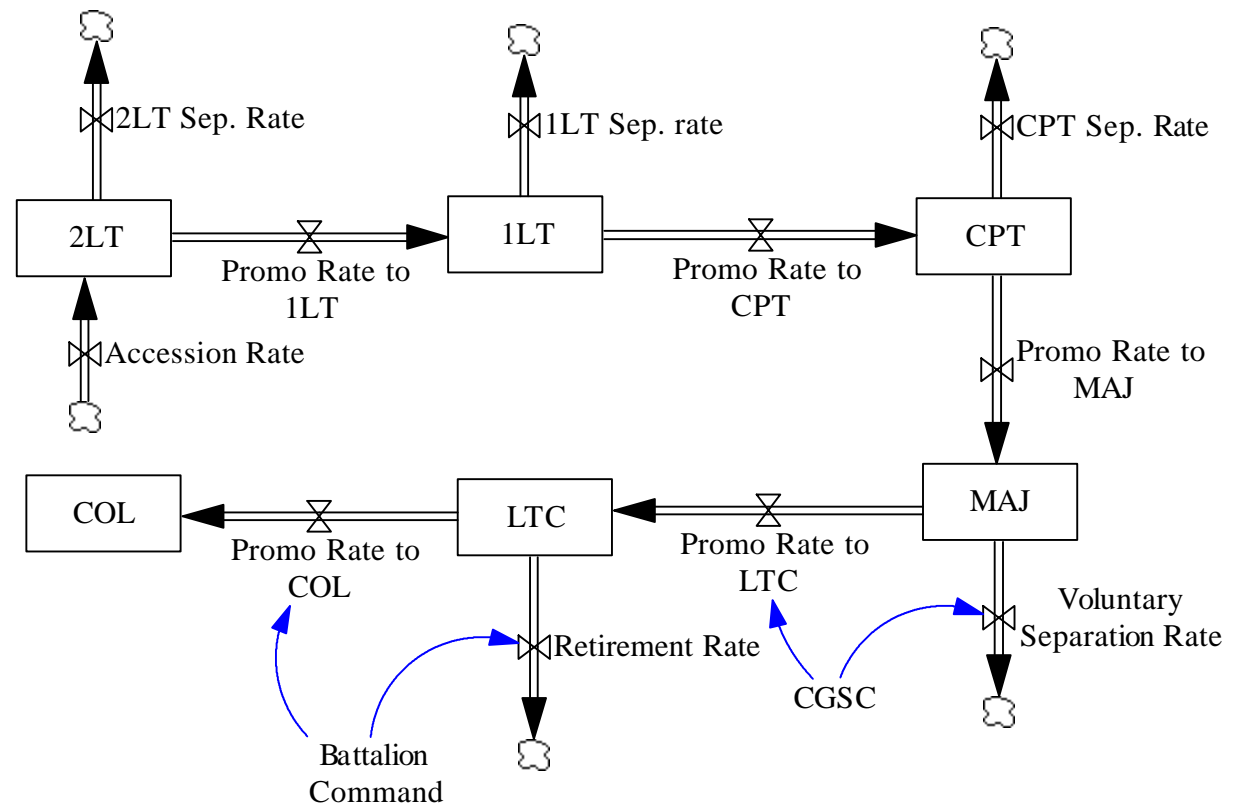
- US Army officer promotion system has changed from a single path system to a multiple path system
- Currently, LT and CPT authorizations and operating strength are not aligned
- Current analytical models though effective, are not as robust, as flexible, or as responsive as the rapidly changing environment demands.



# Background

## Officer Career Path - Pre OPMS XXI

This model shows the US Army's Officer Career Path prior to OPMS XXI. It is a classic "up or out" system with two key gates – selection for Command and General Staff College (CGSC) and selection for battalion command.

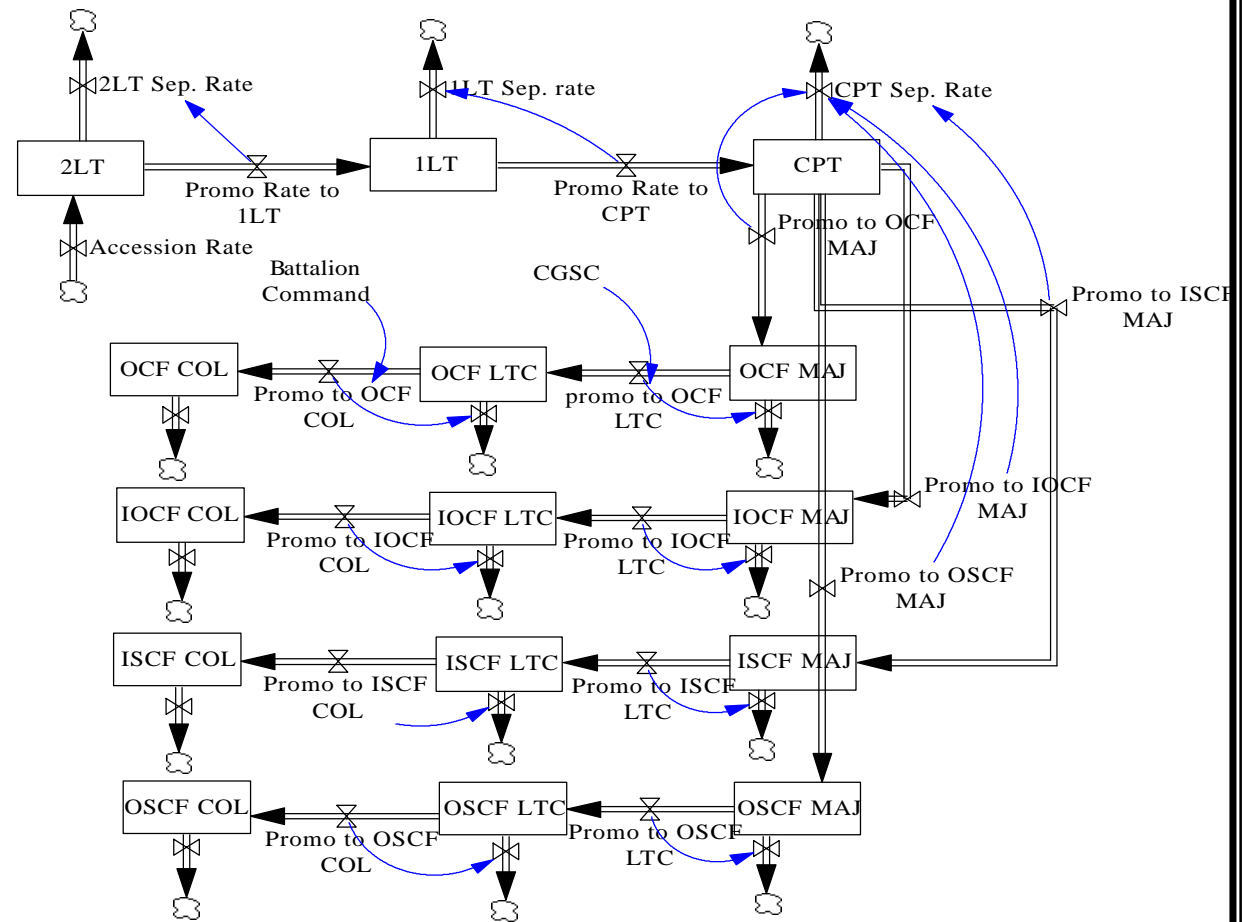




# Background

## Officer Career Path - OPMS XXI

This model shows the US Army's Officer Career Path Under OPMS XXI. It remains an "up or out" system, but more paths to promotion are available.





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## Army Transformation Officer Management Model (ATOMM)

- Officer strength management tool
- Provides greater analytical capabilities for personnel analysts than current spreadsheet models
  - Provides the ability to answer strategic “what if” questions quicker
  - Provides better and faster graphical output capability
- Built upon current spreadsheet model data



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# Army Transformation Officer Management Model



- Stock and Flow Model
  - Stocks: Army Officers
  - Flows: Promotion Rates, Attrition Rates
- Model uses data for FY99-02
- Forecasts used for FY03-05





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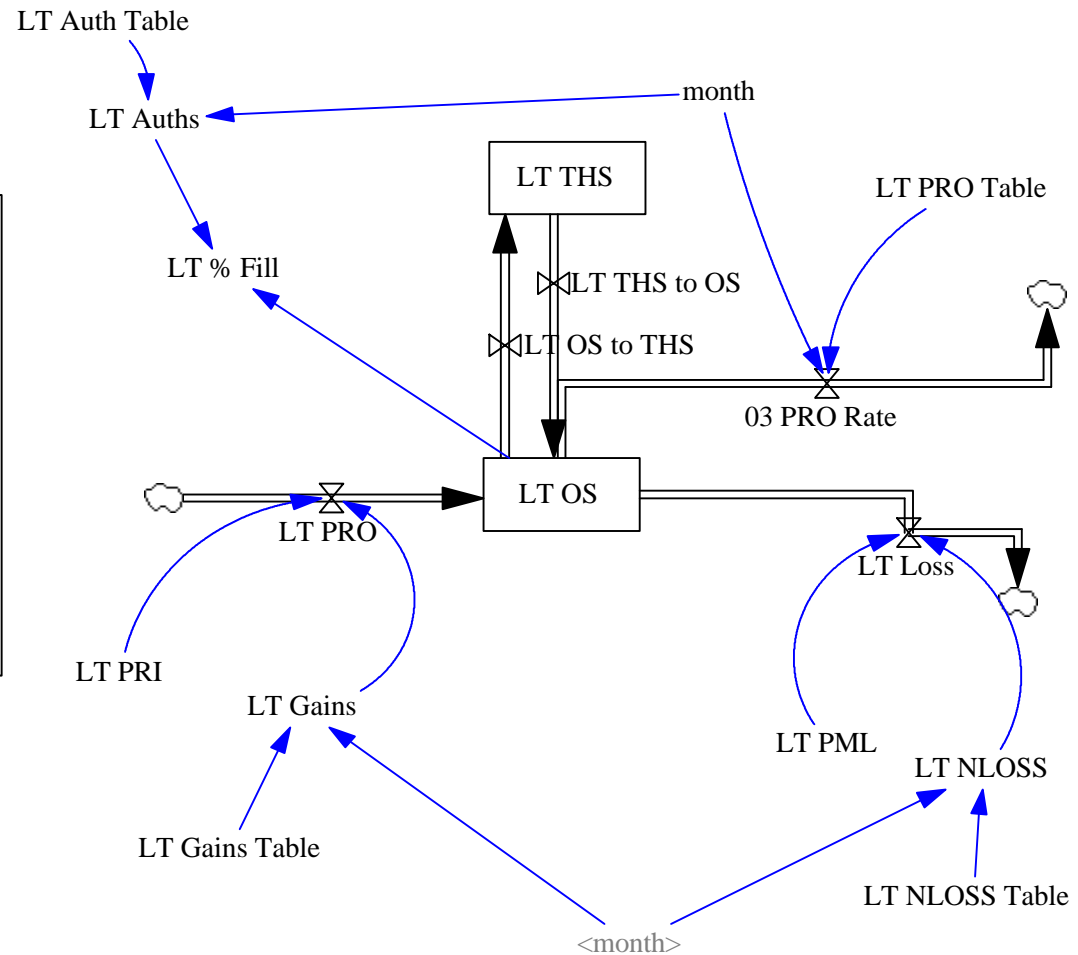
# ATOMM Development

- Collaboration between USMA DSE and US Army G1 (Personnel)
- Modular development by rank
- Step modular integration
  - LT with CPT
  - LT and CPT with MAJ, etc.



# ATOMM - LT

AUTH – Authorizations  
 PRO – Promote Out  
 PRI – Promote In  
 OS – Operating Strength  
 THS – Trainees, Holdees &  
 Students  
 PML – Program Loss  
 NLOSS – Natural Loss





# ATOMM – LT Output

LT Base

LT OS

20,000

14,000

8,000

"03 PRO Rate"

4,000

2,000

0

LT Loss

400

200

0

LT PRO

4,000

2,000

0

1 31 60

Time (Month)

← LT Operating Strength

Factors that Affect LT Operating Strength

← - Promotion to CPT

← - Attrition

← - LT Accessions

LT OS to THS

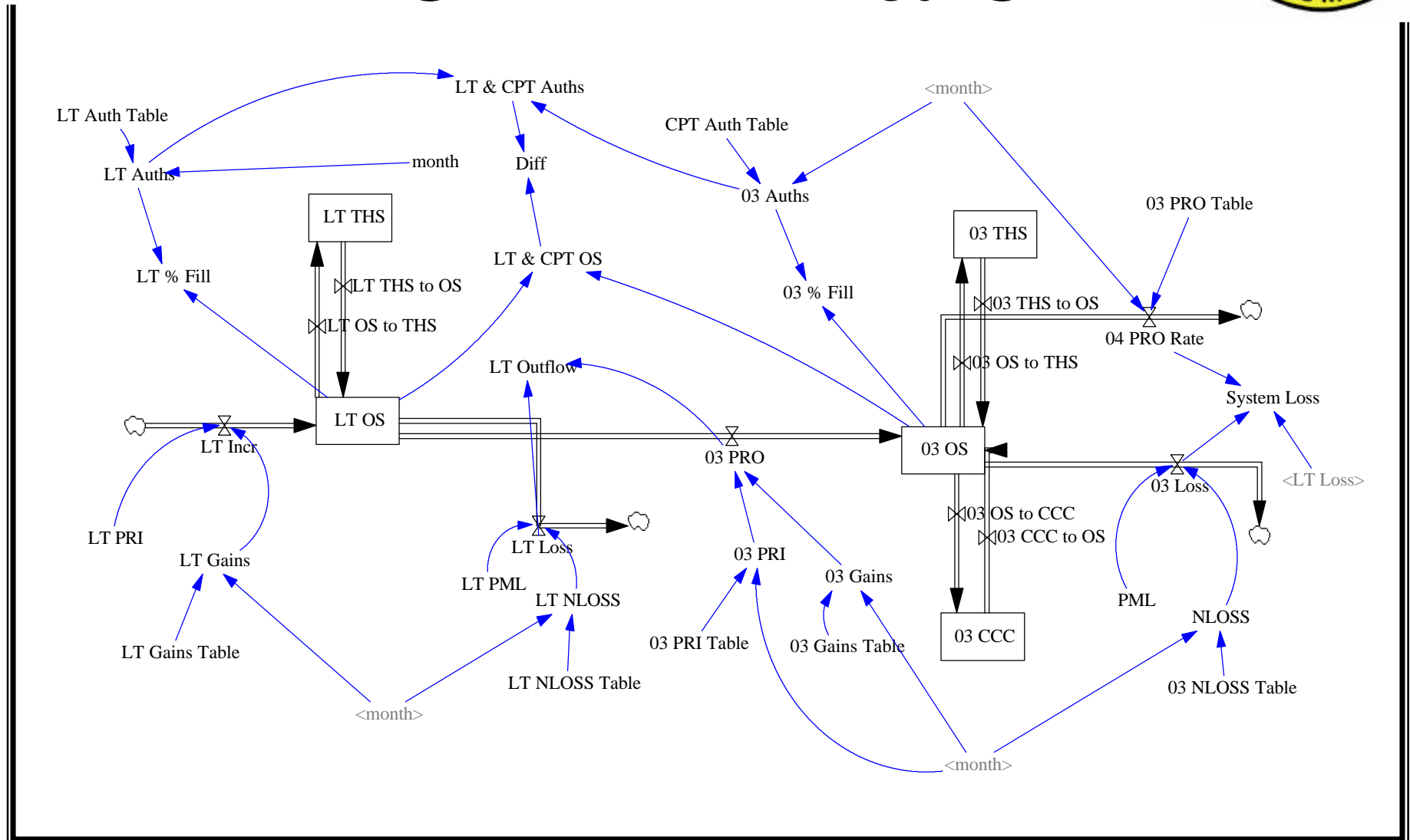
LT Base: 1,712

LT THS to OS

LT Base: 1,712



# ATOMM – LT & CPT

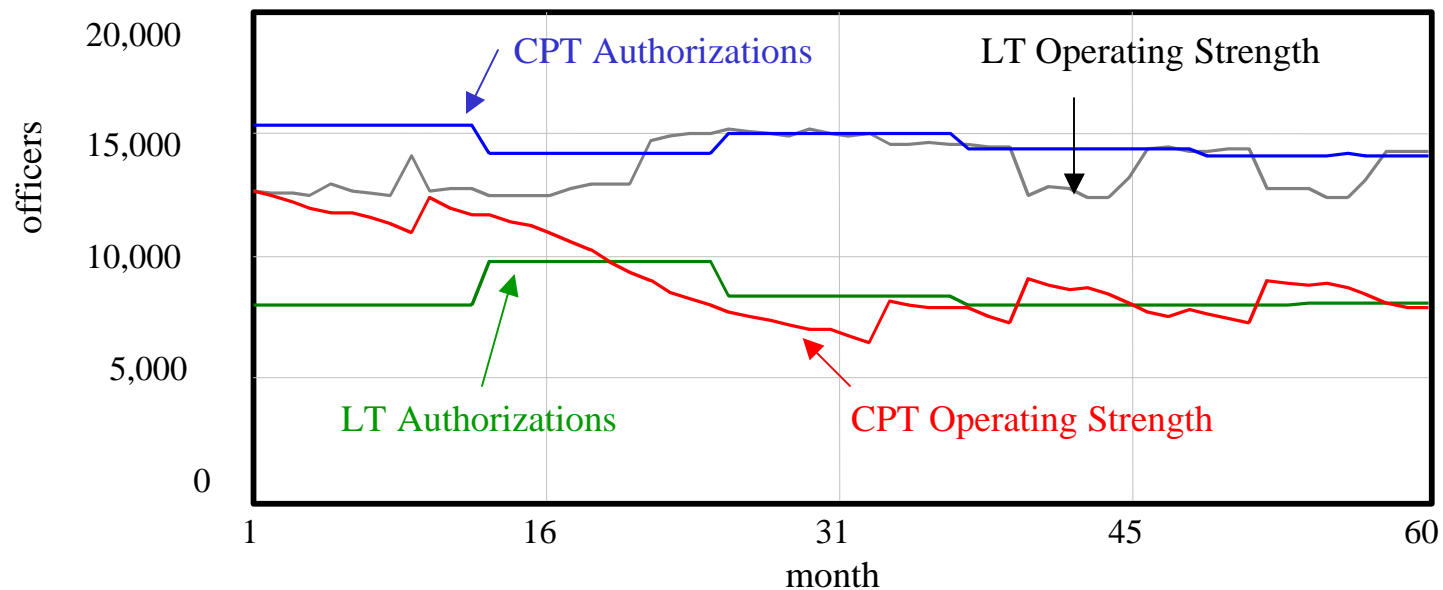




# ATOMM Analysis

**Problem:** LT and CPT authorizations and operating strengths are not aligned...

**LT & CPT Authorizations and Operating Strength**

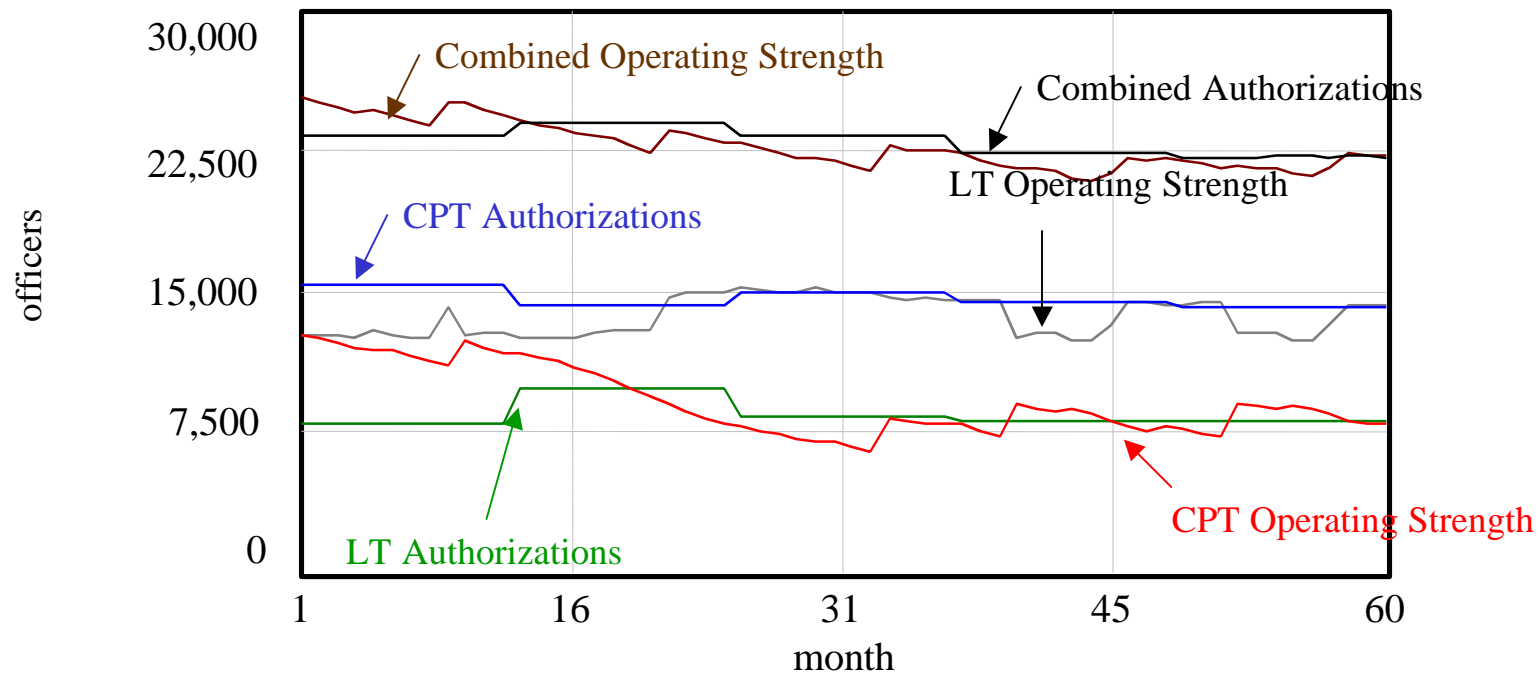




# ATOMM Analysis

**Problem:** LT and CPT authorizations and operating strengths are not aligned...but combined authorizations and operating strengths *are* aligned

## LT & CPT Authorizations and Operating Strength

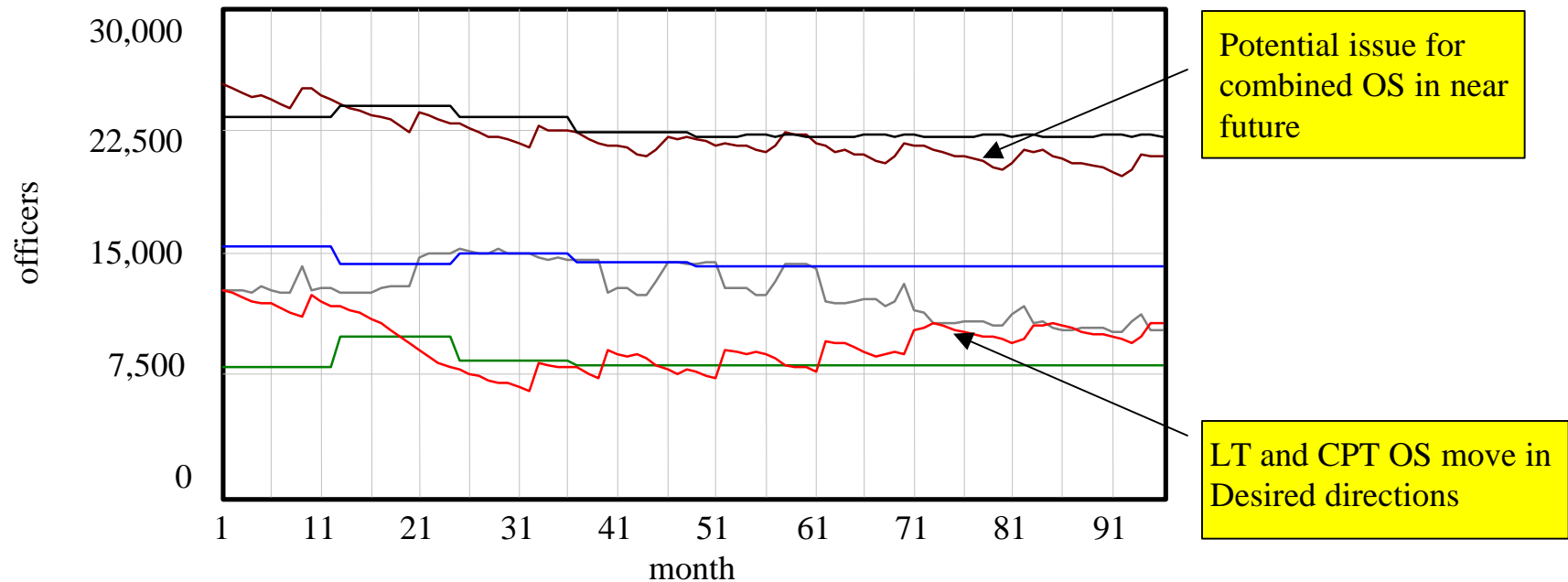




# ATOMM Analysis

**Strategy:** Promote LT's to CPT earlier.

**LT & CPT Authorizations and Operating Strength**





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# ATOMM Analysis

## New Questions

- Why did CPT and LT operating strengths and authorizations diverge originally.
- What to do about the remaining gap between LT/CPT operating strengths and authorizations
- What will reduce the gap between future combined operating strength and authorizations.





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# ATOMM

## Future Work

- Integrate costs into the model
- Show policy impact on higher ranks
- Analyze additional strategies
  - Universal Intermediate Level Education
  - Captain's Career Course – Temporary Duty instead of Permanent Change of Station
- Continue collaboration with Army G1 Personnel Analysts to insure model meets their requirements



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# ATOMM

## Conclusions

- Provides greater analytical capabilities for personnel analysts than current spreadsheet models
  - Provides the ability to answer strategic “what if” questions quicker
  - Provides better and faster graphical output capability
- Built upon current spreadsheet model data
- Unlimited potential for growth in US Army personnel analysis



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# Questions



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# References

- *Commissioned Officer Development and Career Management*, DA PAM 600-3, Headquarters, Department of the United States Army, Washington, DC, 1998.
- Serman, John D. *Business Dynamics: Thinking and Modeling for a Complex World*, Boston: Irwin McGraw-Hill, 2000.