

# K ]Y`Y]b`@UXYbX]YV`XYf`Dc`]nY]`X]fY`\_h`]bg B Yhn`Z]Y`

9]b`@UXYbX]YV`U`Ufa` ]Yfh`X]Y`Dc`]nY]`i bk`]ggYbh`]W. `BUW  
8]YVghU\`j`cb`>Ubg`i`bX`GW`i` \Yb`k`]fX`Yf`ZYgh`[Ybca`a`Yb`"

<Uj`Yf`fb`hgŁ

≠`Y]bYa` `Y\Yf`i`b`[`Yk`Ö\b`]W`Yb`J`cfZU``]b`<Uj`Yf`YfY`[`bYhY`g]W  
Ua` `8]YbghU`[`Y]b`8]YVghU\`ž`XYf`Y\Yf`Ub`Y]b`ØVYfhf]YVYbYg  
H\YUhYfghØW`\_Yf]bbYfh`U`g`Ub`Y]bY`YW`hY`?`f]a`]bU`\UbX`i`b`["`6Y]  
XYa` `J`Yf`UggYb`Y]bYg`@UXYbg`k`Uf`Y]b`&`,`!`Å\`f][`Yf`A`Ubb`gc  
i`bj`cfg]W`h][`ž`XUgg`Yf`X]fY`\_h]b`X]Y`5fa`Y`Y]bYf`j`cfVY]`\_ca`a`YbXYb  
Dc`]nY]ghfY]ZY``]YZ``8]Yg`[`YgW`U\`ž`bUW`XYa` `Yf`VY]a` ` ,`VYfei`YfYb  
XYg`5i`g`[`Ub`[`g`Xi`fW`XUg`5`Ufa`gmghYa` `Y]bYb`8]YVghU\`!`5`Ufa  
Ui`g`[`Y`Ögh`UhhY`"

8Yf`8]YVž`XYf`c`ZYbVUf`b]W`h`Ui`Za`Yf`\_gUa` `k`Ufž`[`UV`g]W`VY]`XYf  
5b`\_i`bZ`h`XYf`6YUa`hYb`U`g`j`Ö``][`i`bVYhY]`][`h``≠W`\_Y]b  
NUddnUfUdd` ž`gc``Yf`[`YgU`[`h`UVYbž`k`Ug`gc`j`]Y`VYXYi`hYh`k`]Y`≠W  
\UVY`b]W`hg`i`b`fYW`hYg`[`YhUb` ``Hfc`hn`X]YgYf`bØW`hYfbYb  
6Y\Ui`dhi`b`[\`UhhYb`X]Y`6YUa`hYb`XYb`J`YfXUW`hž`XUgg`a`]h]`a  
Yhk`Ug`b]W`h`gh]a`a`hYž`i`bX`ZØ`fhYb`Y]bY`8i`fW`gi`W`i`b`[`Xi`fW`"

## 8]Y`9b`hXYW`\_i`b`[`X`Y`f`[`Y`g`h`c`\`Y`b`Y`b`K`U`f`Y`b`

6Y]`XYf`8i`fW`gi`W`i`b`[`ghY``hY`g]W`\`YfUi`gž`XUgg`XYf`A`Ubb`Y]bY  
b]W`h`VYnU`\`hY`>Ubg!`<cgY`gck`]Y`Y]b`DUUf`GW`i`\`Y]b`gY]bYa  
Fi`W`gUW`\_j`YfghYW`\_h`\`UhhYž`X]Y`Yf`ni`j`cf`]b`Y]bYa` `bU\Y`[`Y`Y`[`YbYb  
;`YgW`Å`Zi`[`Yg`h`c`\`Y`b`\`UhhY``9g`]gh`b]W`h`i`b`[`Yk`Ö\b`]W`ž`XUgg  
@UXYbX]YVY`j`Yf`gi`W`Ybž`\`fY`6Yi`hY`ni`j`Yf`ghYW`\_Ybž`UVYf`]b`X]YgYa  
:`U``k`Å`fY`Yg`\_`Ø`[`Yf`[`Yk`YgYbž`X]Y`Dc`]nY]ghfY]ZY`ni`a`Y]XYb`"

8]Y'; YgWÅZhYž'Ui g'XYbYb'X]Y'K UfYb'Ybhk YbXYh'k i fXYbž'\UVYb  
gcZcfh'GhfUZUbhfÅ[ Y' [ Y[ Yb'XYb'&, !Å\ f][ Yb' [ YghY'h''9g'\UbXY'h  
g]WÅ'XUVY]'i a' Y]bYb'fYWÅh]WÅYb'GWÅf]hž'XYf']b'gc'WÅYb': Å''Yb  
ØV]WÅ' ]gh''K Å\ fYbX'8]YVghU\''Y]b'U'hÅ[ ' ]WÅYg'J YfVfYWÅYb' ]ghž  
n]Y\h'X]YgYf'J cfZU''Y]bY'VYgcbXYfY'5i Za Yf\_gUa \_Y]h'Ui Z'g]WÅž'XU  
XYf'8]YV'b]WÅh'Y]ba U'X]Y'A Ø[ ' ]WÅ\_Y]h'\UhhYž'ni 'Ybh\_ca a Yb"

## F Y`Yj Ubn`XYg`J cfZU``g

9]b' ]bhYfYggUbhYf'5gdY\_h'X]YgYf'G]hi Uh]cb' ]gh'X]Y'fYWÅh]WÅY  
< UbX\UVi b[ 'XYg'HÅhYfg''8 U'XYf'A Ubb'\_Y]bYb'ZYghYb'K c\bg]hn' ]b  
8Yi hgWÅ'UbX'\Uhž'k Uf'X]Y'Dc`nY]' [ Ynk i b[ Ybž'a ]h'XYf  
GhUUhgUbk U'hgWÅUZh'F ØW\_gdfUWÅY'ni '\U'hYb'' ð'gc'WÅYb': Å''Yb  
\_Ubb'Yg'bchk YbX][ 'gY]bž'Y]bY'G]WÅYf\Y]hg'Y]ghi b[ 'ni 'Yf\YVYbž'X]Y  
XUfi a' X]Ybž'g]WÅYfni ghY''Ybž'XUgg'XYf'HÅhYf'VY]'ni \_ØbZh][ Yb  
fYWÅh]WÅYb'J YfZU\ fYb'UbK YgYbX' ]gh''8]Yg' ]gh'Y]b'k ]WÅh][ Yf  
GWÅf]hž'i a' g]WÅYfni ghY''Ybž'XUgg'fYWÅh'i bX'c fXbi b[  
Ui ZfYWÅhYf\U'hYb'k YfXYb"

9g'a U[ 'gY'hgUa 'YfgWÅY]bYbž'XUgg'Ya UbX'i ba ]hhY'VUf'bUWÅ  
Y]bYa '8]YVghU\'' ]b'X]Y'5fa Y'XYf'Dc`nY]'`Åi Zh'UVYf'gc'WÅY': Å''Y  
[ YgWÅY\Yb'a Y\ f'\Åi Z][ ž'U'g'a Ub'XYb\_Yb'\_ØbbhY''8]Y'FYU\_h]cbYb  
j cb'HÅhYfb'g]bX'cZh]a di`g] ]i bX'i bØVYf'Y[ hž'k Ug'g]Y'ni  
f]g]\_cVY\UZhYhYb'9bhgWÅY]Xi b[ Yb'j Yf'Y]hYh''8Yb  
G]WÅYf\Y]hga U» bU\ a Yb' ]b'; YgWÅÅZhYb'ni a' Hfchn'[ ]Vh'Yg'ja a Yf  
bcWÅ'j ]Y'Y'8]YVYž'X]Y' [ 'Ui VYbž'g]Y'\_ØbbhYb'i bYbhXYW\_h  
XUj cb\_ca a Yb''8]Yg'nY][ h'Ui WÅž'XUgg'Yg'k ]WÅh][ ' ]ghž'X]Y  
G]WÅYf\Y]hgj cf\_Y\fi b[ Yb' ]b'9]bnY'\UbXY'g[ YgWÅÅZhYb'ni  
ØVYfdfØZb'i bX'ni 'ghÅf\_Yb"

## ; YgYhn`]WÅ Y`F U\ a YbVYX]b[ i b[ Yb

8]Y'I a gYhni b[ 'j cb'G]WÅYf\Y]hg'Y]ghi b[ Yb' ]gh'Y]b'nYbhfU'Yf  
6YghUbXhY]'XYg'XYi hgWÅYb'fYWÅhggmghYa gž' ]bgVYgcbXYfY' ]b  
: Å''Yb'j cb'8]YVghU\''8]YgY'A U» bU\ a Y'X]Ybh'U'g'5VgWÅfYW\_i b[  
i bX'ghY'h'g]WÅYfž'XUgg'X]Y'HÅhYf'ZØf']\fY'HUhYb'ni f'fYWÅYbgWÅUZh  
[ Ync[ Yb'k YfXYb'\_ØbbYb''8]Y'J cf[ Y\Ybgk Y]gY'XYf'6YUa hYb  
nY][ hž'XUgg'X]Y'Dc`nY]'k UWÅgUa ' ]ghi bX'gWÅbY''Ui Z'X]Y'I a ghÅbXY

fYU[ ]Yfhzi a 'X]Y'ÖZZb'h]WXY'G]WXYf\Y]h'ni '[ Yk Ä\ f'Y]ghYb"

Gc`WXY`J cfZÄ`Y`YfÖZZbYb`Ui W`8YVUhYb`ØVYf`gcn]U`Y`i bX  
k ]fhgWUZh]WXY` : U\_hcfYbž`X]Y`ni ` \_f]a ]bU`]hÄhgZfYi X][ Ya` J Yf\U`hYb  
ZØ\ fYb`\_ÖbbYb" >XYf`8]YVghU\`U`h`Y]bY` : c`[ Yž`i bX`Yg`]gh  
YbhgWXY]XYbXž`X]Y`i a ZUggYbXYb`5i gk ]f\_i b[ Yb`ni `YfZUggYbž`X]Y  
gc`WXY`HUhYb`Ui Z`X]Y` ; YgY`gWUZh`UVYb`\_ÖbbYb"

## 9]b`i bYfk UfhYhYf`GWX`i ggU\_\_cfX

⇒ : U`X]YgYg`8]YVYg`V`Y]Vh`UVni k UfhYbž`k ]Y`X]Y`fYW`h`]WXYb  
GWXf]hhY`k Y]hYf[ Y\Yb`k YfXYb`i bX`cV`Yf`X]Y` ; Y`Y[ Yb\Y]h`Yf\Ä`hž  
gY]b`J Yf\U`hYb`ni `ØVYfXYb`\_Yb" `8]YgY`9d]gcXY`Yf]bbYfhi bg`XUfUbž  
XUgg`b]W`h`U`Y`ž`X]Y`]a`GWU`hYb`XYf` ; YgW`Ä`ZhY`ghY\Ybž`]a`a`Yf`Y]b  
<]bhYf[ YXUb`\_Yb`\UVYb` `a`UbW`a`U`g]bX`g]Y`Y]bZUW`i`bØVYf`Y[ h  
i bX`i`bj`cf]g]W`h][ ž`k ]Y`X]YgYf`&, !Ä\ f][ Yž`XYf[ YfUXYk Y[ g`]b`X]Y  
5fa`Y`XYf`Dc`]nY]`hcf`\_Y`hY"

## F Y`Yj UbhY`GhUh]gh]\_Yb`ni a`@UXYbX]YVghU\`

@UXYbX]YVghU\`gh`Y]b`k`Y]h`j`YfVfY]hYhYg`D\Ä`bca`Ybž`XUg`b]W`h`bi`f  
]b`8Yi`hgW`UbXž`gcbXYfb`k`Y`hk`Y]h`Ui`Zh]hh" `@Ui`h`XYf`Dc`]nY]`]WXYb  
?f]a`]bU`ghUh]gh]\_`&\$&&`k`i`fXYb`]b`8Yi`hgW`UbX`ØVYf` "\$\$\$\$` : Ä`Y  
j`cb`@UXYbX]YVghU\`fY[ ]ghf]Yfh" `8]Yg`Yb`hgd]f]W`h`Y]bYa` `5bgh]Y[  
j`cb`Y`hk`U`(`i`]a`J`Yf[ `Y]W`ni`a`J`cf`U`f" `hYfYggUbhYfk`Y]gY`g]bX  
@YVYbga`]hhY`[ YgW`Ä`ZhY`VYgcbXYfg`\Äi`Z[ `]`cb`8]YVghÄ`\Yb  
VYhfcZYb/Yhk`U`(\$i`XYf`@UXYbX]YVghÄ`\Y`YfY][`bYb`g]W`]b  
X]YgYb`Ä`f`\_hYb"

8]Y`5i`gk`]f\_i`b[ Yb`j`cb`@UXYbX]YVghU\`g]bX`Yf\YV`]W`i`bX  
XfØW`\_Yb`g]W`]b`Z]bUbn]Y`Yb`J`Yf`i`ghYb`ZØf`9]bnY`\ÄbX`Yf`Ui`g"  
GWÄ`hni`b[ Yb`ni`Zc`[ Y`j`Yf`]YfYb`9]bnY`\ÄbX`Yf`]b`8Yi`hgW`UbX  
Ä\ f`]W`ØVYf`(`A`j`]UfXYb`9i`fc`Xi`fW`8]YVghU\`" `8]YgY`NU\`nY][`h  
X]Y`B`chk`YbX][`\_Y]h`ZØf`Y`ZY`\_h]`Y`DfÄ`j`Yb]cb`ggghfUH`Y[ ]Yb`i`bX  
G]WXYf\Y]hga`U`bU\`a`Yb`]b` ; YgW`Ä`ZhYbž`i`a`gc`WXY`J`cfZÄ`Y`ni  
a`]b]a`]YfYb"

< ]b hYf[ fi bX]b Zc fa Uh]c bYb`ni a`H\Ya U  
@UXYbX]YVghU\`

@UXYbX]YVghU\` \ Uh]h]Y ZYfY`K i fnY`b`]b`gc n]U`Yb`i bX  
k ]fhgWUZh]WYb` : U\_hc fYb`" C Zha U`g`g]bX`k ]fhgWUZh]WY`B ch`U[ Yb  
i bX`Z]bUbn]Y`Y`DfcV`Ya Y`< Ui dh[ fØbXY`ZØf`gc`WY`HUhYb`"  
ϑgVYgcbXYfY`]b`NY]hYb`k ]fhgWUZh]WYf`i bg]WYf\Y]hž`k ]Y  
k Å\fybX`XYf`7CJ ϑ!%- !DUbXYa ]Yž`gh]Y[ Yb` : Å`Y`j cb  
@UXYbX]YVghU\` ]b`j ]Y`Yb`@ÅbXYfb`Ub`" A YbgWYbž`X]Y`i bhYf  
Z]bUbn]Y`Yb`GWk ]Yf][ \_Y]hYb`Y]XYbž`\_ØbbhYb`j Yfgi W`higY]bž  
bchk YbX][ Y`5fh]\_Y`ni`ghY\`Ybž`k Ug`X]Y`?f]a ]bU`]hÅhgfUhYb`]b  
VYgh]a a hYb` ; Y[ YbXYb`Yf\Ø\h`"

Ni gÅhn`]W`g]bX`dgmW`c`c[ ]gWY` : U\_hc fYb`b]W`h`ni  
j YfbUW`Ågg][ Yb`"8Yf`BYfj Yb\_]hnY`XYg`8]YVghU\`g`cXYf`Y]bY  
ghfUZZÅ`][ Y`Gcn]U`]gUh]cb`\_ØbbYb`YVYbZU`g`a ch]j ]YfYbXY  
9`Ya YbhY`gY]b`" ϑ`j ]Y`Yb` : Å`Y`b`g]bX`X]Y`HÅhYf`b]W`h`]b`XYf`@U[ Yž  
]\f`JYf\U`hYb`ni`\_cbhfc`]YfYbž`k Ug`ni`Y]bYf`\c\Yb`FØW\_ZU``ei chY  
ZØ\fh`" @Ui h`XYf`?f]a ]bc`c[ ]Y`]gh`X]Y`FØW\_ZU``ei chY`VY]  
@UXYbX]YVghU\`g][ b]Z]\_Ubhž`k Ug`X]Y`< YfUi gZcfXYfi b[ `nY][ hž  
?f]a ]bU`]hÅh`YZZY\_h]j`ni`VY\_Åa dZYb`"

< ]ghc f]gWY`DUfU`Y`Yb`ni a`H\Ya U

8Yf`@UXYbX]YVghU\` \ Uh]a`@Ui ZY`XYf`ϑ\fy`]b`j YfgW]YXYbYb  
gc n]U`Yb`i bX`k ]fhgWUZh]WYb`?cbhYi hYb`ghUhh[ YZi bXYb`"9]b  
\ ]ghc f]gWYg`6Y]gd]Y`]gh`X]Y`NY]h`XYf`K Y`hk ]fhgWUZh`g\_f]gY`]b`XYb  
%-`\$Yf`ϑ\fybž`U`g`X]Y`5fa i h`ghUf`\_ni bU`a`"5i W`XUa U`g  
VYcVUW`hYhYb`6Y\ØfXYb`Y]bYb`5bgh]Y[ `XYf`8]YVghU\`gXY`]\_hYž`XU  
j ]Y`Y`A YbgWYb`]b`Yi ]ghYbn]Y`Y`B ch`U[ Yb`[ Yf]YhYb`"

8]Y`[ YgY`gWUZh]WYb`FYU\_h]cbYb`Ui Z`8]YVghU\`j Uf]]YfYb`YXcW`"  
K Å\fybX`]b`XYf`JYf[ Ub[ Yb\Y]h`cZhY]bY`Y\Yf`ghfUZYbXY`<U`hi b[  
Y]b[ Ybca a Yb`k i fXYž`[ ]Vh`Yg`\Yi hni hU[ Y`ni bY`a YbX`5bgÅhYž  
X]Y`Ui ZDfÅj Ybh]cb`i bX`FY\UV`]hUh]cb`UVn]Y\`Yb`"8]Y`8]g\_i gg]cb  
ØVYf`5`hYfbUh]j Yb`ni a` ; YZÅb[ b]gUi ZYbh`U`hž`k ]Y`VY]gd]Y`gk Y]gY  
6Yk Å\fi b[ gghfUZYb`cXYf`gc n]U`Y`8]YbghYž`]gh`Y]b`ϑX]\_Uhc f`ZØf`XYb

g]W\`k UbXY`bXYb`l a [ Ub[ `a ]h`GhfUZh`hYfb`]a `?cbhYl hj cb  
@UXYbX]YVghU\`"

< ]Yf`nY][ h`g]W\`z`XUgg`k ]fhgW\`UZh`]W\`Y`6YX]b[ i b[ Yb`i bX  
[ YgY``gW\`UZh`]W\`Y`K U\fbY`a i b[ Yb`Yb[ `a ]hY]bUbXYf`j Yf\_bØdZh  
g]bX`i bX`Y]bYb`[ fc»Yb`9]bZi gg`Ui ZXUg`J Yf`U`hYb`XYg`9]bnY`bYb  
gck ]Y`X]Y`FYU\_h]cbYb`XYf`; YgY``gW\`UZh`Ui gØVYb"

8YhU]`g

6Ygi W\`Yb`G]Y`i bg`Ui Z.`X]Y!bUW\`f]W\`hYb`"bYh